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Hesban 12: Small Finds: Studies of Bone, Iron, Glass, Figurines, and Stone Objects from Tell Hesban and Vicinity

Paul J. Ray Jr.
Andrews University, rayp@andrews.edu

HESBAN

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SMALL FINDS:

STUDIES OF BONE, IRON, GLASS, FIGURINES, AND STONE OBJECTS FROM TELL HESBAN AND VICINITY

Contributors

Ghazi Bisheh
James J. C. Cox
Frank M. Cross, Jr.
Boguslav Dabrowski
Lawrence T. Geraty
Sidney M. Goldstein
Ralph E. Hendrix
Siegfried H. Horn
Wade R. Kotter
Volker Langholf
Blair D. London
Eugenia L. Nitowski
Elizabeth E. Platt
Paul J. Ray, Jr.
Abraham Terian
Bastiaan Van Elderen
Marie-Louise Vollenweider

Volume Editor
Paul J. Ray, Jr.

Managing Editor
Paul J. Ray, Jr.

Technical Assistants
Robert D. Bates
Owen Chesnut
Matthew Grey
Carrie Rhodes
Darrell J. Rohl
Leona G.. Running

HESBAN 12

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Preface

This book itself has had a long history in terms of its preparation. Some of the articles found within have had earlier incarnations as preliminary reports, either while the excavations were still in progress or shortly thereafter. Initial work on some of the other articles, such as the jewelry, cosmetic and textile artifacts, was also begun before the completion of the excavations (Platt 1994). However, this (and other) volumes were first formalized in 1976-77, when shortly after excavation at the site had ceased, plans were made for the Hesban Final Publication Series. At that time thirty-eight authors accepted writing assignments for the forthcoming series (Final Publication Archives; Ray 2001: 29), of which four volumes were then projected (Andrews University Heshbon Expedition 1977: 1-8). One of these volumes was to concentrate on the objects found at Hesban during the excavations at the site and its nearby cemeteries from 1968 through 1976. Ten of these thirty-eight authors, were to write on various classes of artifacts including: figurines; Arab, Greek and Latin, and Ammonite inscriptions; scarabs; flints; coins; the mosaics; glass; jewelry, cosmetic and textile tools; and objects of stone, clay and bone (Steps in Progress 1983: 1-2).

In order to facilitate the preparation of the publication of the excavation results as well as aid other scholars working with the Hesban data, the decision was made in early 1978 to computerize the vast amount of data from the excavation in order to recall and manipulate it in the easiest possible way (Final Publication Archives; Brower, LaBianca and Mitchel 1980: 2; Ray 2001: 30). This system was designed so as to be capable of being revised, improved upon and updated (Brower, LaBianca and Mitchel 1980: 2-4), a process which has continued to the present.

As of mid-1978, the number of projected volumes for the final publication series had increased to ten, with Siegfried Horn chosen to be the editor of the Small Finds volume (then designated vol. 6) along with other contributors. Additional articles to be included were studies on metal objects (bronze, iron and lead), metallurgy and an in-depth study on an intaglio (Final Publication Archives; Ray 2001: 30). By late 1979, work on this volume (now designated no. 7) had progressed to the point that a number of the proposed articles were either being written as part of doctoral dissertations or reworked from already-published preliminary reports in the journal *Andrews University Seminary Studies*. In addition, almost 600 of the jewelry, cosmetic and textile tools had been drawn for purposes of illustration by Richard Brennecke, a student of Elizabeth Platt, at Rutgers University, who was working on the studies of these artifacts (Final Publication Archives; Platt 1994: 194). However, Siegfried Horn, had asked to be released from his assignment as editor in favor of someone who was based at Andrews University and could work with the material directly at the Horn Archaeological Museum, where the majority of the artifacts were housed (Final Publication Archives), the remainder being located at the Amman Citadel Museum, in Jordan. Lawrence T. Geraty, who was then the Curator of the Horn Archaeological Museum, was the logical choice for Horn's replacement as volume editor.

Progress reports from the early 1980s indicate a few complications, but also some progress. The author of a dissertation on Transjordanian figurines, of which those from Hesban were a part, found his research taking a different direction, necessitating his eventual replacement. With Dr. Horn's exit as volume editor, his work on the objects of stone, clay and bone was also reassigned (Final Publication Archives). Replacements or coauthors would also became necessary for the articles on glass and the Greek and Latin inscriptions (Steps in Progress 1983: 1-2). Nevertheless, a Heshbon author's conference, supported by the Michigan Council for the Humanities/National Endowment for the Humanities, held at Andrews University in March of 1981 (Final Publications Archives, Ray 2001: 31), helped to focus and in some cases complete a number of the small finds studies.

About this same time (1982), however, the Madaba Plains Project was being developed, and with the interests of a number of the former Heshbon Expedition team members now focusing on this or other projects, there was a move away from a preoccupation with Hesban. With the establishment of the Institute of Archaeology and the move of the Horn Archaeological Museum to a new location on the campus of Andrews University at this same time, there was also a loss of momentum on this volume as well. Not long after this, in 1985,

Dr. Geraty, who had taken over as editor of the small finds volume, moved to Atlantic Union College to take up administrative duties there. This took him away from direct contact with the materials, so a few years later he passed on the editorial responsibilities to Ralph Hendrix, who was Assistant to the Curator at the time. More articles were completed during the years when Geraty and Hendrix were the volume editor, and Hendrix (1994: 177-91) summarized its contents in a popular edition of the Expedition's work following a conference celebrating 25 years from the inception of the excavation.

Shortly thereafter, the responsibility for completing this volume was turned over to Paul Ray. His qualifications for this task are outstanding, including having excavated two seasons at Tall Hisban (Phase II) while also serving as chief archaeologist and object registrar; being the author of *Tell Hesban and Vicinity in the Iron Age. Hesban 6*; and having served 5 years as assistant to the curator and another 5 years as Associate curator of the Horn Archaeological Museum. Considerable work was done in the mid-1990s when editorship was first turned over to him, but newer responsibilities caused a temporary cessation of productivity until recently. In addition to typing electronic versions of several of the oldest manuscripts and making numerous tables from hard copies in the mid-1990s before the days of reliable scanners and OCR, he has also had to do a great deal of reorganizing of the various contributions. This has included pulling together into single articles multiple shorter reports that focused on a single artifact or objects that were found in a specific excavation season, as well as dealing with a number of complex formatting and database issues. The fact that this volume has finally reached the point of being published is in large measure thanks to the labor of love that Paul Ray has poured into its completion!

— Øystein S. LaBianca
Andrews University
Berrien Springs, Michigan
March 2009

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Foreword

I am very pleased to present the Foreword for this latest volume of the Hesban Final Publication Series. While all volumes of an archaeological excavation are important and necessary for reconstructing a complete and understandable history of a site, the small finds always generate considerable interest among not only scholars, but lay people who occasionally look over the shoulders of the archaeologists to see what the experts have found. I recall being at one scholarly presentation in which the author dutifully went through the minutiae of stratigraphic and other technical details, and then recaptured the attention of the audience when he announced he was now going to present the "goodies" that is, the small finds!

I think the general interest that everyone seems to hold for these small treasures is that these are the objects that put us most in touch with actual individuals who created the past we seek to understand. As we turn these small finds over in our hands (or examine the drawings and photographic images of them), we are immediately drawn into a more intimate contact with an actual person from antiquity. As opposed to other artifact classes (e.g., architecture and pottery that are created by group or in mass), small finds often provide a window into an ancient human mind. Moreover, each bone, glass, metal or ceramic object is a unique creation, an expression of individualism. We can get a sense of what the person who made the object was thinking.

However, beyond this more romantic and individualistic contact with the past, the small finds provide invaluable information on the broader cultural context in which these individuals lived and functioned; indeed, small finds provide more "information content" for the buck. As the various chapters of this book will show, rich insights into Hesban's ancient technologies, trade relations, social and political structures, military innovations, education, and diet can be derived from studies of these small finds. Of course, the written documents (ostraca, stamps, and seals) increase that information value many times over, both in terms of the above categories, as well as in linguistic and historical specifics. And, since this volume brings the small finds of all periods from Hesban into one study, the entire chronological and cultural range of human activity at Hesban can be conveniently viewed in one place. Diachronic perspectives are nicely enhanced.

Finally, I would note that the broad range of artifact classes presented here naturally required a large number of expert scholars to provide the studies, and we are grateful for their contributions. Readers will recognize several of the founding fathers of the Heshbon Expedition among the contributors including Drs. Siegried Horn and Bastiaan Van Elderen who have since passed on. However, we would also note the good work of the technical staff and, especially, Dr. Paul Ray for pulling this all together. We trust this volume will greatly enhance the understanding of the ancient world of Hesban.

— Randall W. Younker, Director
Institute of Archaeology
Andrews University
Berrien Spring, Michigan
March 2009

Chapter One

INTRODUCTION

Paul J. Ray, Jr.

Chapter One

Introduction

The present volume is devoted to an analysis of selected categories of the small finds that were excavated at Tell Hesban (fig. 1.1) and its nearby cemeteries and probes (fig. 1.2) as well as occasional finds from sites located on the Hesban regional survey (Ibach 1987).

Volumes dedicated entirely to studies of the artifacts excavated from a single excavation (Crowfoot, Crowfoot and Kenyon 1957; Oppenheim 1962 and Daviau 2002) are rather few in number, and most of these tend to be dominated by ceramic studies. The present volume focuses on small finds to the exclusion of ceramic vessels, which will be the subject of a separate volume in this series.

The first three studies (chaps. 2-4) focus on the Arabic, Latin, Greek and Ammonite inscriptions which were found during the excavations at Tell Hesban and vicinity. The lead article, on the Arabic inscriptions, is by Ghazi Bisheh, a former director of the Department of Antiquities of Jordan, who participated in the work at the site during the first season of excavations, in 1968, as the Department of Antiquities representative. The inscriptions found in this study range from ostraca with only a letter or two on them to monumental inscriptions found near the site. There is also an additional note on Inscription Five by Eugenia Nitowski. This study is followed by others on the Latin and Greek inscriptions from the site by Langholf, Van Elderen, Cox and Geraty. Three of these inscriptions were produced on potsherds, the fourth on a Rhodian jar handle. The concluding study on inscriptions is Frank Cross's definitive analysis on all of the Ammonite Ostraca and Graffiti. Although permission was given to publish this study in a collection of essays by the author reflecting his life's work (Cross 2003: 70-94), in advance of this publication, its appearance here should still be considered the *editio princeps*.

Chapter 5 is a typological study by Boguslav Dabrowski of the 16 terracotta figurines that were uncovered at Tell Hesban and two other pieces that were found at sites on the Hesban Survey. In chapter 6 Ralph Hendrix focuses on a unique Early Roman period fenestrated bowl and associates it with the Roman cult of the dead.

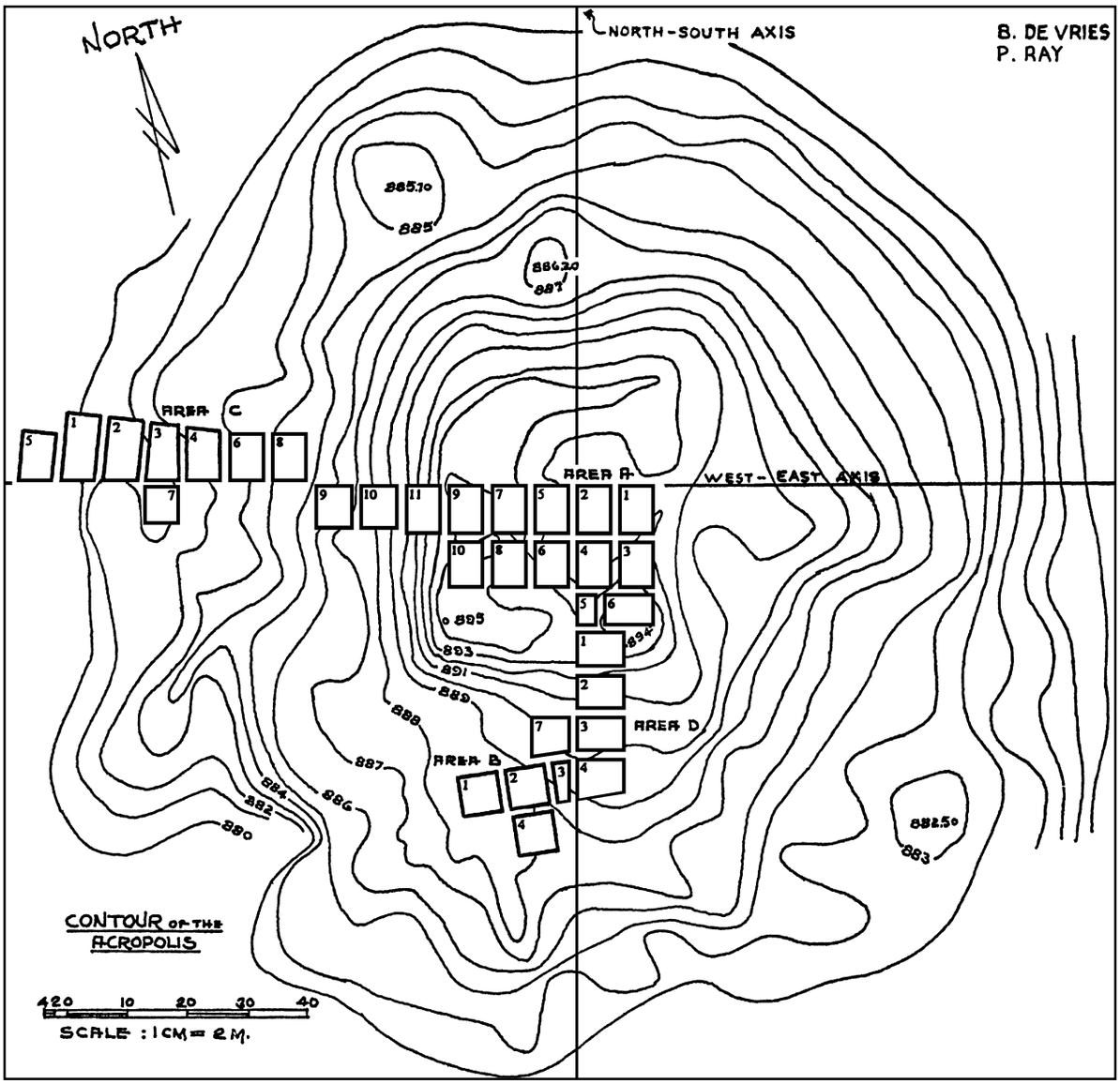
Siegfried Horn, the director of the Heshbon Expedition during the first three seasons of excavations at the site, has analyzed the scarabs form Hesban (chap. 7). Two of the four artifacts presented here are heirlooms, originally fashioned during earlier periods of Egyptian history. The other two are either late, locally-made imitations, or beads (cf. the additional note by Elizabeth Platt). In chapter 8, Sidney Goldstein, of the Saint Louis Art Museum and formerly of the Corning Museum of Glass, presents a preliminary report on the ancient glass artifacts that appeared at the site from the Hellenistic through the Islamic periods.

A wide range of artifacts including those used in domestic food production (querns, millstones, mortars and pestles), mercantile activities (weights), furniture (inlays), recreation (game pieces and toys), architecture (door sockets, bricks and tiles) and even sculpture fragments are the focus of Wade Kotter's analysis of objects made of stone, clay, bone and ivory, in chapter 9. The study has been updated slightly by Paul Ray in order to bring it into line with current views on the stratigraphy of the site, especially the Iron Age (Ray 2001).

In Blair London's analysis of metallurgical samples from Hesban (chap. 10) he tests eight selected iron artifacts for carburization (conversion of bloomery iron to steel). The study indicates that irrespective of their period of use, weapons were always carburized, but other objects such as agricultural tools were not.

Chapter 11, by Elizabeth Platt, is on the textile tools from Hesban. It takes a broad view of "textile tools" and includes both tools used in textile production (spindles, whorls, loom weights, needles, and weaving-pattern spatulas) and their use (buckles, buttons, fibulae and garment pins). The study has been updated in a number of ways by Ray.

Figure 1.1 Plan of Tell Hesban with Excavation Areas.

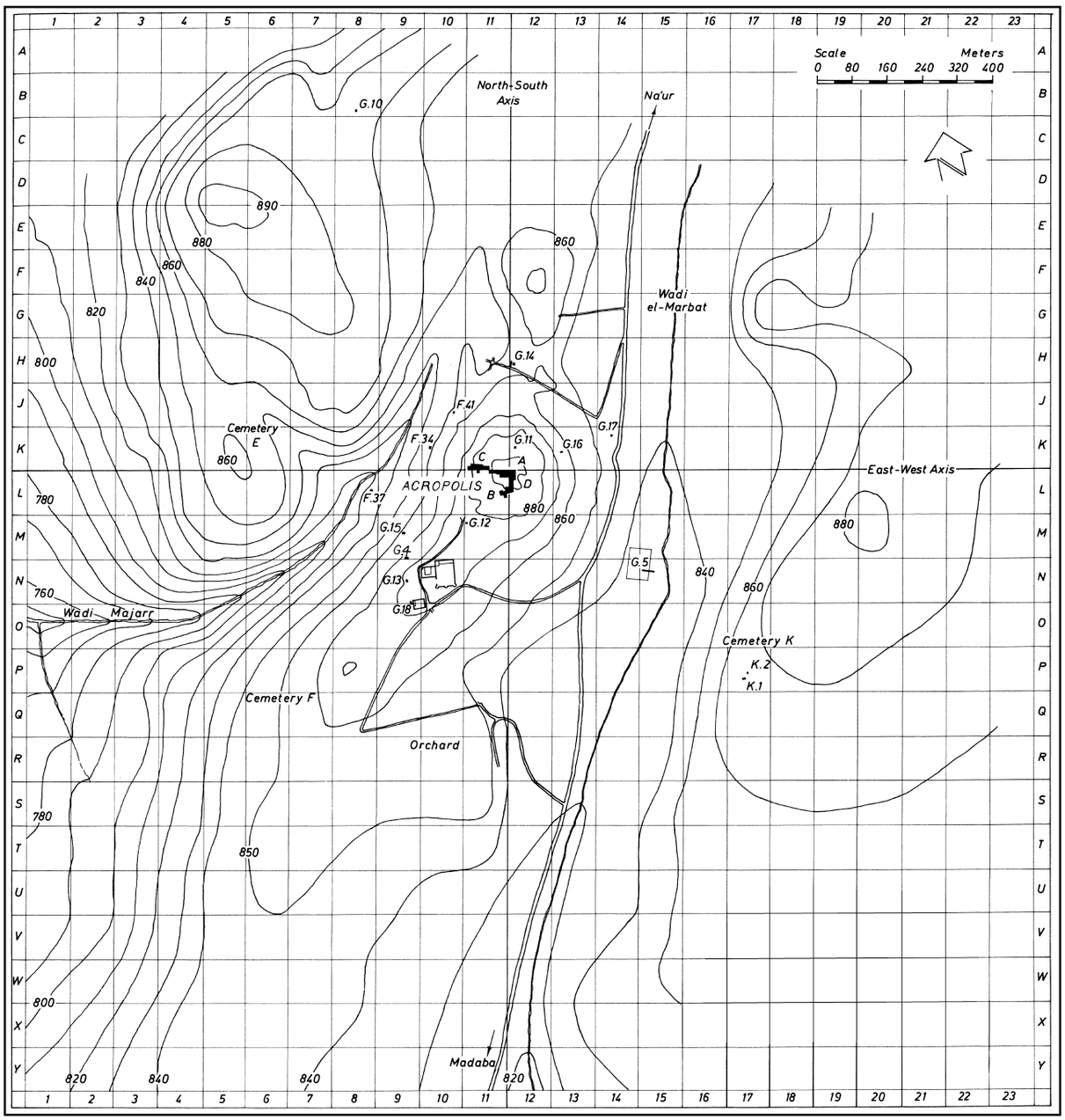


Elizabeth Platt has also authored the study on the cosmetic objects that were found at the site (chap. 12). These include such artifact types as spoons, spatulas, applicators, kohl sticks, rods and various cosmetic containers. This study is followed by another one (chap. 13) by Platt on jewelry; including beads, bangles, rings, earrings, necklaces, chains, pendants, hairpins and brooches.

The artifacts that appear in chapter 14, by Vollenweider and Platt, were either used in religious contexts or do not fall comfortably in any of the other artifact categories within the book. The final chapter (15) is a numismatic study by Abraham Terian on 403 of the coins[1] that were found at Hesban during the five seasons of excavations.

While many of the papers included here are written by second-generation investigators, i.e., those who did not themselves participate in the original excavations at Hesban, in Jordan, their interest and professional expertise qualifies them to make conclusive statements about the material culture found at the site.

Figure 1.2 Tell Hesban with Its Cemeteries and Probes.



In some cases, sections, or all, of an included study has appeared earlier as part of the preliminary reports on the Heshbon Expedition, published in the journal *Andrews University Seminary Studies* during or shortly after the excavation at the site. They are included here for the sake of completion and because they remain the most definitive treatments on the subjects. For various reasons some studies that were originally conceptualized have not reached fruition. During the years that this volume has been in preparation at least one author has died before finishing his assignment. Some articles, written early in the the process, are now somewhat out of date. While bibliographies have been updat-

ed where possible, the fact that these studies were written at various times over the last 30 years will no doubt come in to play. Although an attempt has been made to keep the style of the articles consistent,[2] a certain unevenness always results in multi-authored works due to varying content and methodologies.

While state of the art when it was first conceived, this volume can no longer adequately be compared with those that have been published more recently (Daviau 2002; cf. Ray 2004: 56-57). Nevertheless, it is representative of the few volumes within this genre and should be a welcome addition to those doing comparative research on small finds in Transjordan and the wider region.

Notes

[1]A careful perusal of the Tell Hesban Object List in the Appendix will reveal that not all of the objects found on the tell, the cemeteries, or the regional survey have been dealt with in this volume. For various reasons some of the objects were unavailable to the authors at the time their studies were undertaken. While studies were simply not made on some object categories, reasons for the unavailability of individual artifacts include, but are not limited to, objects that were recorded in the field but were left there because they were too cumbersome to remove, unidentified objects about which little or nothing can be said, objects that have since been physically lost during museum relocations, and objects about which the information has since been misplaced or lost.

[2]A level of inconsistency will certainly be noticed in terms of the expression of object numbers as used throughout the various studies. Hesban object numbers were assigned consecutively throughout the seasons of excavations and can therefore be expressed either with (e.g., 71.0669) or without the year designation (merely as "Object 669" or "No. 669"). Some authors have chosen to use one form, some one of the others. Only in terms of the captions was any attempt made at consistency. Here the form "Object + basic number" was used throughout for purposes of style.

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Chapter Two

THE ARABIC INSCRIPTIONS FROM HESBAN

Ghazi Bisheh

with a note by
Eugenia L. Nitowski

Chapter Two

The Arabic Inscriptions From Hesban

Introduction

Among the wealth of interesting material finds excavated at Hesban are 12 Arabic inscriptions. Although a few of these inscriptions provide some useful epigraphical indications which might lend themselves to stratigraphic conclusions, the majority (inscriptions 5-6, 9-12) are quite fragmentary. Two inscriptions (1-2) were found in secondary use, so their value for the interpretation of the site is difficult to evaluate. Four of these inscriptions have previously been published, but are included here for the sake of completeness.

Inscription Number One

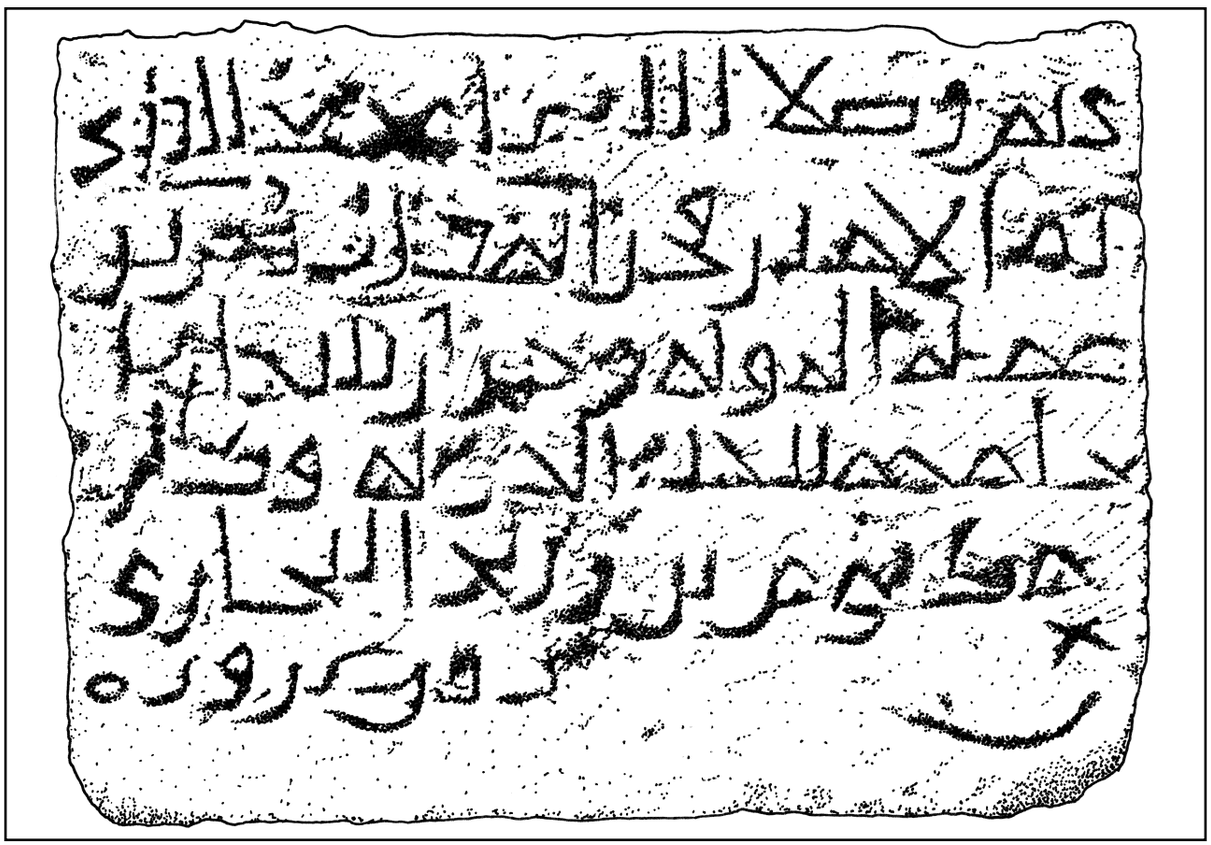
Inscription one (pl. 2.1) is engraved on an ashlar stone embedded in the third course from the base of the western wall of a house, situated on the southwest side of the tell. The inscribed side of the stone, which faces south, is concealed behind a portion of a wall that is built up against it, hence it was not possible to know its exact dimensions.

The text reads:

1. هدا قبر ابن حمدان القيِ (صر)
2. سنه سبـه وخمسهمايه
3. رحمه الله عله

Plate 2.1 Inscription One.

Figure 2.1 Inscription Two.



1. This is the grave of Ibn Ḥamdan al-Qay (Sar?).
2. The year five-hundred and seven (= 1113-14 A.D.).
3. May the Mercy of God be upon him.

The text, as can be seen from the photograph, was written in rather crude characters and is devoid of diacritical points. The reading is fairly certain and the meaning is clear, except for the last word in the first line which is open to question. It is evident from the contents of the inscription that it originally belonged to a tomb. The date 507 of the Arabic calendar (A.D. 1113-14) obviously refers to the death of the deceased, though the word *Tūfiya* (died) which usually precedes such dates has been omitted here. Also noticeably absent is the word *basmala* which usually precedes such burial inscriptions. (For a similar inscription, dated about 40 years earlier, see Van Berchen 1894: 71).

Inscription Number Two

The block upon which this inscription (fig. 2.1) appears is embedded in the east wall of the same house as inscription number one. It is placed in the fourth course from the top.

The text reads:

1. عدم و..لا الا .. برا ... دالى
2. .. الامير فخر لملغالى ... بن
3. عماد الدوله وحمدان شدا ...
4. حامي ..... الدوله وكـ ...
5. مكتوم بن زريد (؟) ابخارى
6. ... بن عرور

1. . . . . .
2. Al-Amīr Fakhr al-Maʿālī . . . . bin (son of)
3. ʿImād al-Dawlah and Ḥamdān Shadā . . . .
4. Ḥāmid . . . . al-Dawlah Wa (k . . . .)
5. Maktūm bin . . . . . (Zurayd?) al-Bukhārī
6. . . . . bin ʿArūr.

The inscription, written in bold Kūfic script, is incomplete and must have extended at least the length of an additional block to the right of what is presently extant. Unfortunately the inscription does not bear a date; however, the honorific title (*Laqab*) "Fakhr al-Maʿālī" would date it to the 11th century A.D. (Arabic 5th century) at the earliest (Richter-Bernburg, personal communication June 28, 1980). These honorary titles began in Abbasid Caliphal circles during the first quarter of the 10th century A.D. (Arabic 4th century). At a somewhat later date similar honorifics were given out to Iranian and Turkish Amirs. The inscription could not be entirely deciphered, nor is its original purpose clear. The *nisba* "al-Bukhārī" which appears in the fifth line is interesting, though not surprising.

At the beginning of the 12th century A.D. (Arabic 6th century), eastern Jordan was on the brink of disaster as the Frankish Crusaders ran riot in the open land terrorizing the inhabitants of the major towns. The latter appealed to the ruler of Damascus, Ẓahīr al-Dīn Tughtukīn, for protection (for his biography, *cf.* Ibn Wāṣil 1953: 1:9). Tughtukīn, taking advantage of the arrival of a Turkoman band under the leadership of a prince named al-Aṣfahīd, carved out for himself a territory in Jordan which included: al-Balqā, Muʾāb, and Al-Sharāh. Thereafter the burden of protecting that area against Crusader incursions rested upon Al-Aṣfahīd. Perhaps Bukhārī mentioned in the inscription was one of those Turkoman warriors or their descendants (*cf.* Ibn al-Qalānisī 1908: 158).

Inscription Number Three

Inscriptions three and four have previously been published (Kritzeck 1976: 157-62). Inscription three (fig. 2.2) is a glass object (74.2106; HAM 74.0413) which was found in locus G.6:29. It is a translucent blue-green glass that was broken at the edge and measures 19 mm × 16 mm × 3 mm.

It reads:

1. لا اله
2. الا الله

1. There is no god
2. but God.

Inscription Number Four

Object 74.2060 (Dept. of Antiquties; cf. fig. 2.3) was found in locus A.9:54 and is made of translucent green glass. It measures 17 mm × 16 mm × 3 mm.

It reads:

الا الله

.... but God (?)

The reading of inscription three, which on the basis of epigraphical style is dated to the late Umayyad period, presents no problems because the

Figure 2.2 Inscription Three.

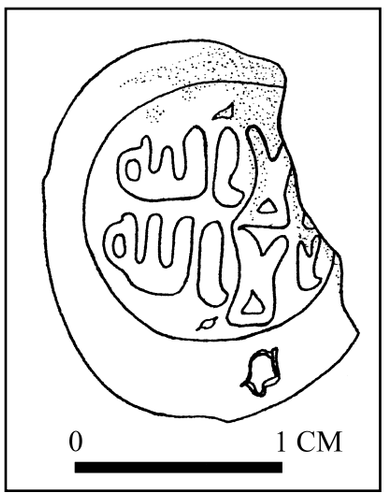


Figure 2.3 Inscription Four.

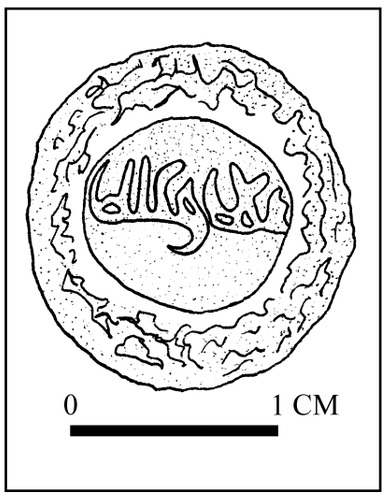
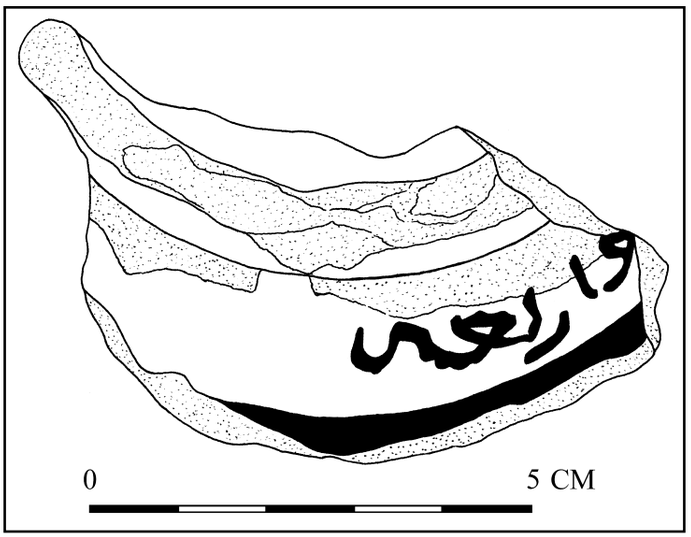


Figure 2.4 Inscription Five.



letters are regular and distinctly legible. However, inscription four is more problematic and its reading cannot be established beyond doubt. Kritzeck has suggested two alternative readings for this inscription: *ʾIllā . . . llāh* (the second half of the first part of the *Shahāda*) or *al-ʾImām* (1976: 159-60). Although the second reading is plausible and would support a dating in the Fatimid period, the former reading seems more likely especially because the final *mim* of the word *al-ʾImām* is not distinct. On historical grounds there is no problem in reading the inscription as *al-ʾImām*, which has a Shiaite connotation. The population of Amman, which was included in the same administrative district as Tell Hesban, has been described as mostly Shiaite during the Fatimid period (al-Muqaddasī 1909: 179).

Another difficulty associated with these two objects is the understanding of their function. Kritzeck has already pointed out that "neither of these two objects could be described as simply a seal impression in the customary sense" (1976: 160). He maintains that "they were, in a novel sense, glass weights probably attached to smooth pyramidal metal masses of standard weight or vessels of standard measurement" (1976: 162). Nevertheless the inscriptions are "anomalous leading to an initial doubt whether these objects were indeed glass weights or rather tokens or amulets" (1976: 160).

In general, the right of issuing glass weights was delegated by the Caliph to the governor, the finance director, or to both jointly. The names of the issuing authorities were affixed on the glass pieces which were often countersigned by lesser executives (Balog 1976: 4f). Without entirely disregarding Kritzeck's hypothesis, I would like to suggest that these glass objects may have been impressions of a seal (*Khātam*) attached to metal surfaces.

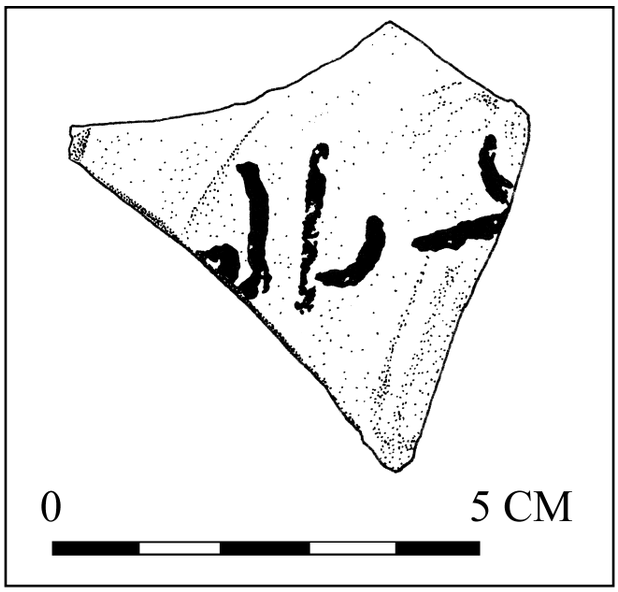
The word *Khātam* is applied not only to actual seals with retrograde inscriptions, but also to common seal-like objects with regular inscriptions of a pious or auspicious character. The latter are distinguished by the absence of personal names (al-Naqshabandī, *et al.* 1974: 2.921ff). The early caliphs are known to have used seals upon which were engraved a pious formula. (For the seal inscriptions of the early Caliphs see Hammer-Purgstall 1849: 8ff).

It might be of some interest to mention here that the seal of the Abbasid Caliph Hārūn al-Rashīd (A.D. 685-809), was engraved with the formula "*Lā ʾilāha illā Allāh*" ("There is no god but God"), the same formula which appears on Inscription 3 (Ibn al-Kāzarūnī 1970: 125; Al-Naqshabandi 1974: 37, no. 33).

Inscription Number Five

This inscription (fig. 2.4), written on a Mamluk sherd (74.1934; Dept. of Antiquities), was found in locus C.6:16. It was originally published by Eugenia Nitowski (1976:163-64; see note at the

Figure 2.5 Inscription Six.



end of this chapter). The inscription, which is painted in black under a transparent glaze, reads: واربعه (and four).

Inscription Number Six

Inscription six (fig. 2.5) is also an ostracon, (71.886; Dept. of Antiquities). It was published originally by Myrian Ayalan (1973: 132) as "Heshbon Ostracon III." It was found in locus C.4:59 in pail 315, with the dominant associated pottery coming from the Umayyad, Early Byzantine, and Late Roman periods. Although the script is very fragmentary she managed to identify the following letters: *k* (ك), which occurs as the last letter of some word; a letter which could be *b* (ب), *t* (ت), *n* (ن), or *i* (ي), attached to an *a* (ا) followed by an *l* (ل), to which was probably attached an *ṣ* (ص), or perhaps *ṭ* (ط). The final letter could also be *ʿAyn* (ع). The reading, however, remains uncertain.

Inscription Number Seven

This inscription (pl. 2.2) is inscribed on a silver ring (71.0933; HAM 71.0359) that was excavated in locus D.6:33c). The ring was found in pail 77 associated with pottery sherds dating for the most part to the Ayyubid-Mamluk period. Other sherds were from the Umayyad, Early Byzantine, Late and Early Roman periods. The inscription consists of three words engraved on the top surface in retrograde order (*i.e.* mirror writing).

It reads:

السرح الطبيعه

The secret is in nature.

As can be seen from the photograph (pl. 2.2), the inscription is without vowel signs or diacritical points. Therefore another possible, though less likely, reading is الشر في الطبيعه (The evil is in nature). The inscription is rather enigmatic, being neither of a pious nor auspicious character. The ring might be regarded as a *Khātam* (seal-ring), which is general-

Plate 2.2 Inscription Seven.

Plate 2.3 Inscription Eight.

ly worn on the little finger of the right hand. (For the significance and use of such seal-rings in 19th century Egypt *cf.* Lane 1973: 31.)

The epigraphical style of the inscription, written in bold Kufic script, would date the seal-ring to the 12th century A.D. (sixth Arabic century).

Inscription Number Eight

Inscription number eight (pl. 2.3) is on a bronze ring (76.2453; Dept. of Antiquities) with an inscribed silver plate attached to its flat top surface. It was found in locus C.6:45. The dominant associated pottery that was found with it in pail 83 was from the Ayyubid-Mamluk period.

The inscription consists of three lines engraved in retrograde order (*i.e.* mirror-writing):

1. اعما اطب
2. جلم‌اذ وصرى
3. ابو افـاغر

The reading is not certain, nor is the meaning clear. It appears to contain an aphorism. Only the third line could be tentatively read as ابو افـاغر (Abu Afaghir).

Inscription Number Nine

Inscriptions nine and ten are on opposite sides of the same sherd. This ostracon (76.2807; Dept. of Antiquities) was found in locus G.14:18. Inscription nine (fig. 2.6) is incised on the inside of the potsherd. It is rather small and does not contain enough writing to convey any meaning. It is clear, however, that it consisted of a single word. The following identification is suggested. The first letter cannot be readily recognized since its upper and right sides are broken. The second letter could be an *l* (ل), followed by the letter *ʿayn* (ع), to which is attached the final letter *w* (و). Hence the reading could be لعو (*lʿaw . . .*)

The epigraphical style of the inscription, especially the form of the letter *ʿayn* (ع) and the upward extension of the horizontal stroke of the letter *w* (و) would point to a date not earlier than the 12th century A.D. (sixth arabic century).

Inscription Number Ten

Inscription ten is incised on the outside of the potsherd (fig. 2.7) and is also too small and fragmentary for a proper identification. The problem is further complicated by the fact that the letters were incised in a coarse and careless script with little attention to proper division of letters. The following tentative identification is suggested:

Figure 2.6 Inscription Nine.

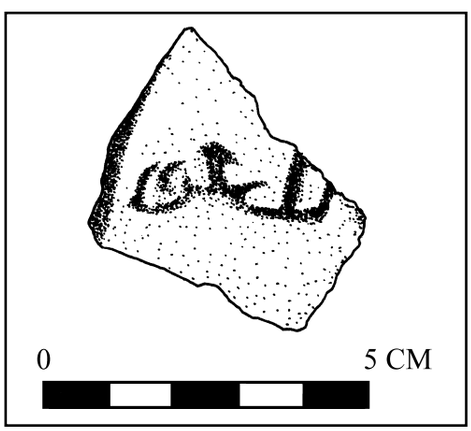


Figure 2.7 Inscription Ten.

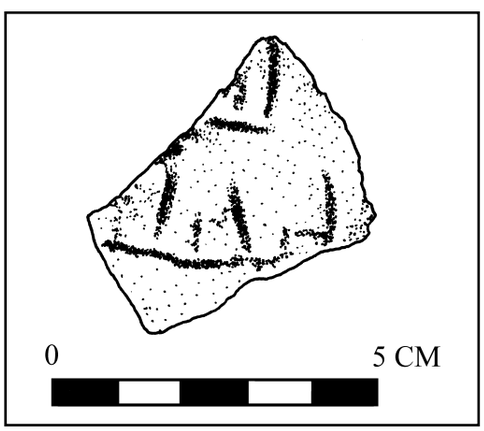
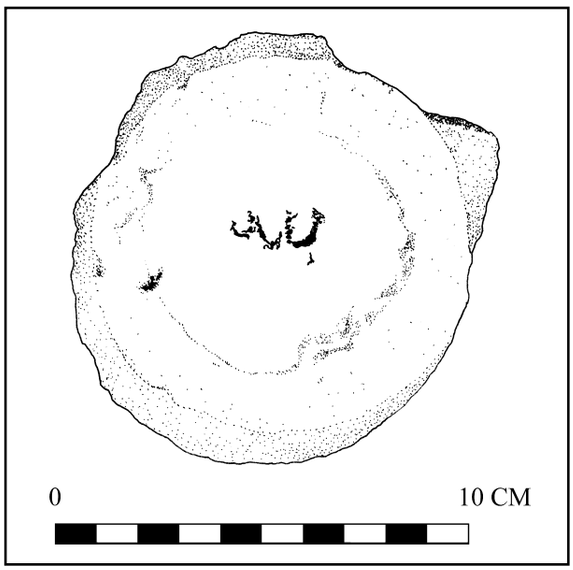


Figure 2.8 Inscription Eleven



1) لا
2) لهلكلع

Line one: a first letter *l* (ل) to which is attached an *a* (ا), or another *l* (ل).

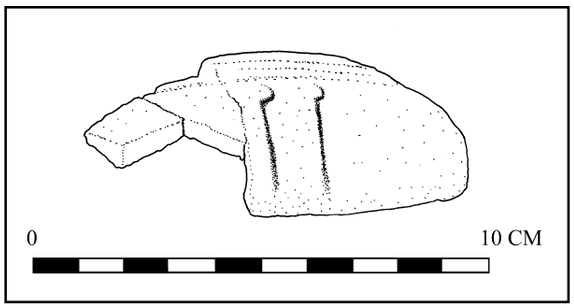
Line 2: a first letter which could be *l* (ل), or *a* (ا) to which is attached the letter *m* (م), followed by the letters *l* (ل), *k* (ك), *l* (ل) or perhaps an *a* (ا) and a final letter which could be identified as *ʿayn* (ع). All the letters are joined to each other.

Inscription Number Eleven

Inscription eleven (73.1677; HAM 73.0349) is painted on a clay base (fig. 2.8) and was found at Site 95 (Tell er-Rama) of the Hesban Survey (Ibach 1987: 22). This inscription consists of a single word written in rather crude characters. It could be read as لله (for God), provided that the final letter which is slightly rubbed off at the top is *h* (ه), or alternatively it could be read as بيد (in the hand of) which seems to be a less likely interpretation.

As was the case with inscription ten, the epigraphical style here does not provide us with any definite indication of date. The archaic style of the letters should not tempt us to assign it prematurely to the early centuries of Islam.

Figure 2.9 Inscription Twelve.



Inscription Number Twelve

This ostracon (fig. 2.9) contains two letters (76.2729; HAM 76.0488) written upon a molded sherd that was found in locus A.11:12. The sherd seems to have been part of the base and side of a glazed bowl. The glaze is largely gone. The two remaining letters, which are written in the monumental Naskhi script typical of the Mamluk period, both appear to be *a* (ا).

Note: An Inscribed Mamluk Sherd
(by Eugenia L. Nitowski)

Inscription Number Five (above) is not actually an ostracon in that the inscription was added at the time of the manufacture of the vessel, not after it was broken.

The fragment is a portion of the base of a bowl, measuring 7.0 × 3.8 × 2.9 cm, whose ware is white, coarse, granular, and very soft. The interior surface (and also partially on the exterior) is decorated with black-painted designs with a cobalt-blue spot under a colorless, crackled, decaying, transparent glaze, over a white slip, with an unglazed ring base, which has the diameter of 9 cm. The Arabic inscription (fig. 2.4), also in black, and under the glaze, is incomplete due to the break. Its position on the outside body, just above the ring base, is upside-down.

The extant portion of the inscription is read as: . . .*waarbaʿah* (“and four”). That it should be read as “forty” is impossible, since it would then have to be *arbaʿûn* (in colloquial Arabic, *arbaʿîn*). The last letter is unquestionably the final *h* often used for the *tā marbūṭa* (the “tied” *tā*). The numerals 3 through 10 have *tā marbūṭa* in the masculine case

and none in the feminine. This reversal of normal gender endings is found in other Semitic languages and is called polarity. The gender of the singular of the counted noun determines the gender of the numeral. Why is "and four" on the base? It could be a date or a commemorative number, or perhaps, a number of measurement; however, the latter seems unusual on so ornate a piece.

Regarding date, the sherd comes from a dominant Ayyubid/Mamluk context. The locus (C.6:16) where it was found is described as being possibly the patio to the rooms of that period. The dominant associated pottery of pail 29 came from the Ayyubid/Mamluk period, though there were also some Byzantine sherds. It is typical of Syrian ware from the Mamluk period.

Acknowledgement

I would like to express my thanks to Professors Lviz Richter-Bernburg and Heinz Gaube for trying their wits at the interpretation of inscriptions 1 and 2. However, the present author bears the responsibility for any errors or shortcomings in the reading and interpretation of the text.

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Chapter Three

LATIN AND GREEK INSCRIPTIONS FROM TELL HESBAN

James J. C. Cox, Lawrence T. Geraty,
Bastiaan Van Elderen, and Volker Langholf

Chapter Three

Latin and Greek Inscriptions From Tell Hesban

A Latin Potter's Seal Impression
(Langhof 1969)

The sherd (68.211; Dept. of Antiquities) which contains the Latin seal impression discussed here was found in the 1968 season in Locus C.3:4 at Tell Hesban. The locus consisted of a layer of wash on the western slope of the *tell* containing Arabic, Byzantine, Roman and Hellenistic period pottery. The sherd measures 80 × 56 mm and was part of a wide handle of a large bowl, of which the rim had a diameter of 43 cm.

The seal impression was applied to the soft clay before firing and consists of a rectangular frame, 48 × 22 mm in size, in which there is a text of two lines. All letters and strokes are impressed into the clay (fig. 3.1). The narrow side of the frame was placed close to the edge of the rim and runs almost parallel to it. The text is fairly well-preserved and can be read in part.

Most of the thousands of stamped Latin impressions on vessels as well as on bricks and tiles that have been found among the debris of the ancient world are "trade-marks." Usually they contain only the name of the manufacturer, either in the nominative or genitive (Cagnat 1898: 316-17). The proposed reading of the Latin seal found at Tell Hesban is:

1. Ċ· ḂĖLLICI
2. ZMÀṘAGDI

This reading is based on the photograph and the dots above the letters indicate defective letters, regarding which the following remarks can be made:

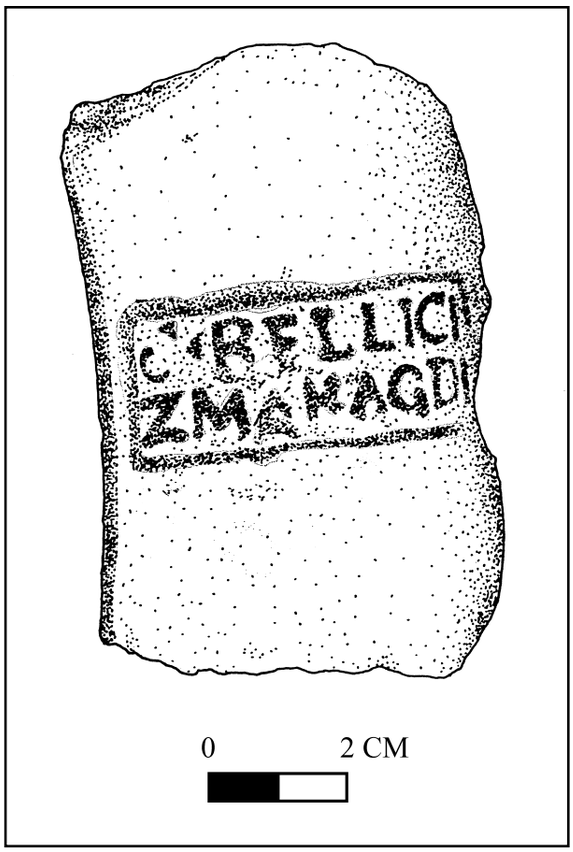
Line 1. The first letter C is not quite clear, but fairly certain.

The stamp seems to have been defective in this respect. This is followed by an "interpoint" sign. These signs were commonly used as word dividers. The second letter is a B. The lower part of the bottom curve is damaged, but the remaining traces make the reading certain. The E is problematical. The shape resembles a C, but the reading requires an E, which may have had the familiar form of the Greek letter. However, the horizontal stroke in the center and the lower curve have been lost. The remainder of the letters in the line are legible.

Line 2. In this line only letters three and four present problems. The remaining traces of the third letter fit an A, which the reading requires. The fourth letter is also defective. Here, the top of the R is gone, but the very rare K, the only other possibility, can be excluded.

The seal contains a typical Roman name consisting of (1) *praenomen*, (2) *nomen gentile*, and (3) *cognomen*. The *praenomen* Gaius always appears as the abbreviation C. The *nomen gentile* Bellicus or Bellicius is well attested, both forms occurring indiscriminately (Groag and Stein 1932: 361-63). Clay stamp impressions of manufacturers named Bellic(i)us are listed in *CIL* 12.3.1, no. 10010/284 (on pottery vessels), and *CIL* 15.1, no. 887 (on bricks). The genitive form *-ci* may be the usual contraction of a fuller *-cii*. The *cognomen* Zmaragdus or Smaragdus occurs frequently in Roman as well as in Greek inscriptions. (See the index to Dessau 1892-1916; Robert 1963: 275-76.) However, The Tell Hesban sherd seems to be the only example where Zmaragdus appears in combination with Bellic(i)us. It is attractive but perhaps far-fetched to suppose that Gaius Bellic(i)us Zmaragdus was a descendant (of a freedman?) of the illustrious Bellic(i)i who flourished in the first and second centuries A.D. Although the social status of our unknown Latin pottery manufacturer cannot be determined, it is obvious from the tripartite structure of the name that he was not a slave.

Figure 3.1 Latin Inscription.



A Greek Ostracon From Tell Hesban
(Van Elderen 1974)

During the 1973 season at Tell Hesban an ostracon was found in Locus B.4:120W. The ostracon (73.1668; Dept. of Antiquities) was written upon a Hellenistic period body sherd according to James Sauer, although the latest of the associated pottery was dated to the Early Roman period. It was designated Heshbon Ostracon IX (fig. 3.2). Its dimensions are 59 × 55 mm.

There are traces of about 35 Greek letters on the sherd, although only a few are in alignment, and there is no actual sequence of lines, although for the sake of scholarly convention we have treated the ostracon as if it had it. Examination and experimentation have not produced any identifiable words or combinations. It would appear that this is possibly the product of someone's doodling or scribbling.

The following list is a transctiption of recognizable letters. The first six "lines" appear up-to-down along the face of the ostracon. The last two "lines" are along the right side:

1. α ι o
2. θ υ ω η
3. ρ η σ
4. o
5. α υ ασ γ o σ
6. ασ κ λ α ρ
7. o o o o
8. ρ o σ

Palaeographically, some of the letter-forms on this ostracon are parallel to literary documents in the late Hellenistic period. The *alpha* (lines 1, 5), *gamma* (line 5), *ēta* (lines 2, 3), *iota* (line 1), *kappa* (line 6), *rho* (lines 6, 8), *sigma* (lines 5, 8), *upsilon* (line 5), *and ōmega* (line 2) are the typical forms used in the second and first centuries B.C. (Thompson 1912: 144-45). The dotted *thēta* in the ostracon (line 2) is very common in third century A.D. documents (Thompson 1912: 144). For examples see Roberts (1956), no. 1 (4th century A.D.), no. 2a (1st half of the 3rd century A.D.); no. 3a (ca. middle of the 3rd century A.D.); and Turner (1971), no. 51 (325-275 B.C.), no. 52 (early 3rd century A.D.), no. 54 (middle 3rd century A.D.). However, some examples of the dotted *thēta* are also found in

Figure 3.2 Heshbon Ostracon IX.

the second and first centuries B.C. (Thompson 1912: 145). For examples see Roberts (1956), no. 6a (1st half of the 2nd century B.C.); and Turner (1971), no. 55 (middle of the 1st century B.C.). Since the forms for the *alpha, sigma,* and *ōmega* (assuming one reads the second letter after the dotted *thēta* in line 2 on the ostracon as an *ōmega*) on the ostracon do not occur in third century A.D. documents (cf. Roberts 1956: nos. 1, 2a, 2b, 3a, 5a, 5b; Turner 1971: nos. 40, 51, 52, 53, 54), it appears that palaeographically the ostracon should be dated in the second or first centuries B.C. This would comport with the ceramic context of the ostracon cited above, i.e., Late Hellenistic/Early Roman period.

Rhodian Potter's Date-Stamp
(Cox 1976)

In the process of excavating a Late Hellenistic period pool (Sauer 1976: 54) during the 1974 campaign at Tell Hesban, workmen under the direction of Area Supervisor James A. Sauer unearthed, along with a number of datable ceramic sherds, an amphora handle (74.2095; Dept. of Antiquities) impressed with a finely executed and remarkably well-preserved Rhodian potter's "date-stamp" (fig. 3.3). While some of the sherds in Locus B.4:249 were from the Iron Age and Persian periods; none were later than the Hellenistic period, and those were for the most part Late Hellenistic period (198-63 B.C.) in origin (Geraty 1974: 5).

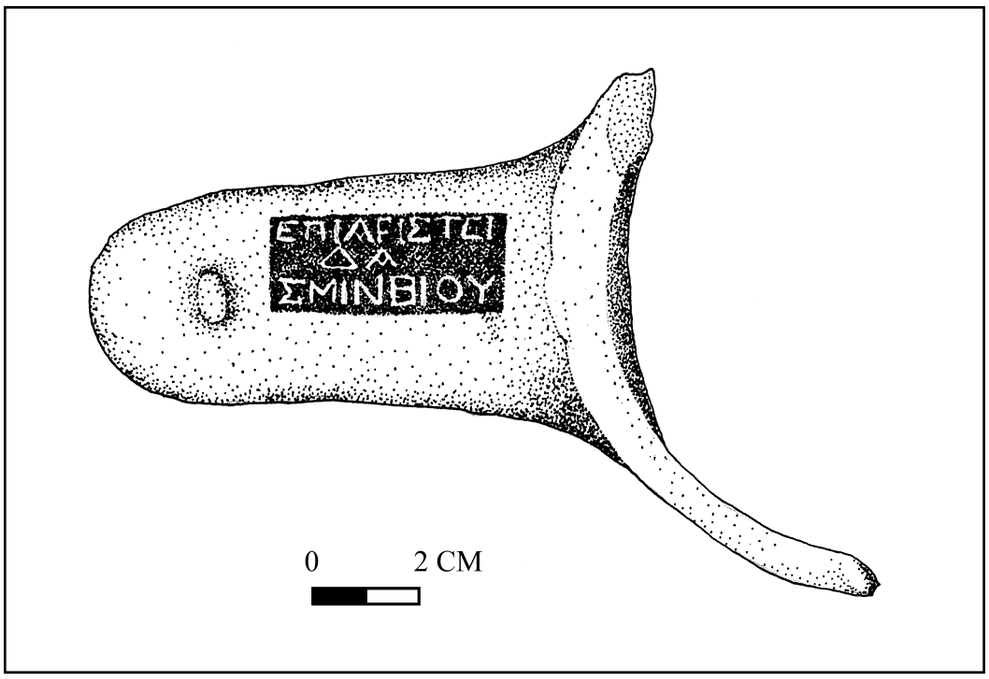
The rectangular Rhodian potter's stamp bears the Greek formula ΕΠΙ ΑΡΙΣΤΕΙΔΑ ΣΜΙΝΘΙΟΥ (preposition, eponym, and name of the month) which formula was probably intended to indicate the date of the license which permitted the potter involved to manufacture and sell his wares according to specific governmental regulations regarding capacity (Grace 1934: 197-99; 1949: 177-78; 1961: 10-11). Consequently, this stamp was probably intended to be understood as indicating that the license which permitted the production and sale of the amphora on which it was impressed was secured, literally, "in the time of (or, in the year of) Aristeidas, in the month Sminthios," or more idiomatically "in the year in which Aristeidas served as priest of Helios, in the Sminthios." The preposition ΕΠΙ followed by a "personal genitive" in formulae such as this one normally connotes "in the time of." (Smyth 1963: § 1689b).Since the Rhodian priests of Helios usually carried their priestly responsibilities for one year, we may rightly understand the preposition in this particular case to connote "in the year of" or "in the year in which was priest of Helios." According to Grace (1949: 177), a name accompanied by *epi*, "in the term of," is the principal expression which has been recognized as a date (Grace 1961:10).

That the form ΑΡΙΣΤΕΙΔΑ is to be understood as a genitive is clear. It is formed on the analogy of those proper names of the first declension masculine whose stems end in *α*, which, in the genitive singular, contracts *α*-(*ι*)*ο* to *α* in both Aeolic and Doric (Smyth 1963: §§ 211 and 214D; Goodwin 1958: §§ 193 and 196c). Compare the form ΛΕΟΝΤΙΔΑ in the formula ΕΠΙ ΛΕΟΝΤΙΔΑ ΑΡ[ΤΑ]ΜΙΤΙΟΥ ("in the time of Leontidas, in the month Artamitios") which occurs on a Rhodian amphora handle found in the Baths of Placcus in Gerasa (Welles 1938: 460, item 244); and the form [ΑΡ]ΧΙΛΑΙΔΑ in the formula ΕΠΙ [ΑΡ]ΧΙΛΑΙΔΑ ΚΑΡΝΕΙΟΥ ("in the time of Archilaidas, in the month Karneios") which occurs on a Rhodian amphora handle found in Field I, Locus 279, during the 1957 excavations at Beth-zur (Sellers *et al.* 1968: 81), and on the left handle of a Rhodian amphora (CMC 199) of the early 2nd century B.C. housed (as of 1949) in the Cyprus Museum, Nicosia (Grace 1949: 186-87); and the same form in the formula ΕΠΙ ΑΡΧΙΛΑΙΔΑ ΑΓΡΙΑΝΙΟΥ ("in the time of Archilaidas, in the month Agrianios") which occurs on a Rhodian amphora handle found in Field I, Locus 296, also during the 1957 excavations at Beth-zur (Sellers *et al*. 1968: 81).

The names of the Rhodian months are: ΑΓΡΙΑΝΙΟΣ, ΑΡΤΑΜΙΤΙΟΣ, ΒΑΔΡΟΜΙΟΣ, ΔΑΛΙΟΣ, ΔΙΟΣΘΥΟΣ, ΘΕΣΜΟΦΟΡΙΟΣ, ΘΕΥΔΑΙΣΙΟΣ, ΚΑΡΝΕΙΣ, ΠΑΝΑΜΟΣ, ΠΕΔΑΓΕΙΤΝΥΟΣ, ΣΜΙΝΘΙΟΣ, ΥΑΚΙΝΘΙΟΣ, and the intercalary month ΠΑΝΑΜΟΣ ΔΕΥΤΕΡΟΣ (Grace 1934: 307).

The month Sminthios occurs on a stamped Rhodian amphora handle found during the 1908-1910 excavations at Samaria (Reisner *et al*. 1924: 314); on another found in the Forum at Gerasa (Welles 1938: 460, item 245); and on yet another found during archaeological excavations carried out by the Department of Antiquities of Jordan on the Citadel at Amman (Stratum IV; Hellenistic period). The stamp on this handle reads ΕΠΙ [ΑΡΧΙ] ΒΙΟΥ ΣΜΙΝΘΙΟΥ ("in the time of Archibios, in the month Sminthios") (Zayadine 1973: 31). It also occurs on a stamped Rhodian amphora handle in

Figure 3.3 Rhodian Potter's Stamp.



the Benachi collection, Alexandria, dated to the late 2nd century B.C. (Grace 1953: 126, item 109).

Rhodian amphorae are regularly dated according to the annually changing priests of Helios. Aristeidas was one such priest (Grace 1949: 177; 1948: 144; 1953: 120).

Grace observes that on Rhodian jars the eponym is frequently qualified by the title "priest." For example, compare the formula ΕΠ(Ι) ΙΕΡΕΩΣ Θ[Ε]ΡΣΑΝΔΡΟΥ ("in the time of Thersandros, priest [of Helios]") on a Rhodian amphora handle dating to the 4th quarter of the 3rd century B.C., found in the forum at Gerasa (Welles (1938: 460, item 241). Compare also the formula ΕΠ(Ι) ΙΕΡΕΩΣ ΑΡΙΣΤΩΝΙΔ[Α] ("in the time of Aristonidas, priest [of Helios]") on a Rhodian amphora handle (SS 240 [E]) found in the Agora in Athens, dating to the end of the 3rd century B.C.; the formula ΕΠ(Ι) ΙΕΡΕΩΣ ΞΕΝΟΦΑΝΤΟΥ ("in the time of Xenophantos, priest [of Helios]") on a Rhodian amphora handle (SS 258 [A-HD]) also found in the Agora in Athens, dating to the last quarter of the 3rd or the 1st quarter of the 2nd century B.C.; and the formula ΕΠ(Ι) ΙΕΡΕΩΣ ΕΥΠΟΛΕΜ[ΟΥ] ("in the time of Eupolemos, priest [of Helios]") on a Rhodian amphora handle dating to the 1st century B.C. in the Benachi collection, Alexandria (Grace 1934: 225; 1953: 126, item 84).

That our stamped handle belonged to an amphora that was produced on the island of Rhodes is highly probable. First, as far as its ceramic fabric and finish are concerned, it consists of a fine pink ware finished with a smooth pink slip both of which are characteristic of amphorae produced on the island of Rhodes (Grace 1934: 203); second, its form is contoured in the abrupt angular fashion so distinctive of stamped handles of amphorae fabricated on the island of Rhodes (Grace 1934: 203, 218-20); and third, its stamp is distinguished by both its location (impressed upon the upper surface of the handle at a slight remove from its exterior angle) (Grace 1934: 201-6, pl. 2.5) and the formula (preposition [ΕΠΙ], eponym [ΑΡΙΣΤΕΙΔΑ], and name of the month [ΣΜΙΝΘΙΟΥ]) which it bears (Grace 1934: 204). Both are typical of the date-stamps of amphorae manufactured on the island of Rhodes. Finally, the *eponym* (ΑΡΙΣΤΕΙΔΑΣ) occurs frequently on date-stamps of amphorae made on the island of Rhodes.

It is highly probable that this stamped handle belonged to an amphora that was made sometime

during the latter part of the 3rd or the early part of the 2nd century B.C. The form of the handle, with its rather abrupt angular profile, is typical of Rhodian amphora handles of that period (Grace 1934: 203-218, esp. 220). The angular type began not earlier than the third quarter of the third century B.C. and the angle sharpened in the early second century B.C. (Grace 1953: 119-120). The priest whose name it bears and during whose term of office it purports to have been manufactured is most probably to be identified with that Aristeidas, priest of Helios, who fulfilled his term of priestly service some time within the four decades between *ca.* 220-180 B.C. (Grace 1934: 204; 1952: 528; 1953: 122; Crowfoot 1957: 381).

There was another Aristeidas who was priest of Helios on the island of Rhodes sometime during the last quarter of the 4th or the 1st quarter of the 3rd century B.C. Reisner, Fisher and Lyon (1924:18) list two Rhodian amphora handles discovered at Samaria during the 1908 excavation season which bear the name ΑΡΙΣΤΕΙΔΑΣ in the formula, proposition [ΕΠΙ], eponym [ΑΡΙΣΤΕΙΔΑ], and name of the month [ΑΡΤΑΜΙΤΙΟΥ (1); and Σ[ΜΙ]Ν-[Θ]ΙΟΥ (1)]; and nine other Rhodian amphora handles found at Samaria during the 1909-1910 season which bear the name ΑΡΙΣΤΕΙ-ΔΑΣ in the formula, preposition [ΕΠΙ], eponoym [ΑΡΙΣΤΕΙΔΑ], and name of the month [ΑΓΡΙΑΝ-ΙΟΥ (4); ΑΡΤΑΜΙΤΙΟΥ (2); ΒΑΔΡΟΜΙΟΥ (1); ΠΑΝΑΜΟΥ (1); and ΣΜΙΝΘΙΟΥ (1)] (Reisner, Fisher and Lyon 1924: 314). Crowfoot, Crowfoot and Kenyon 1957: 381) list seven Rhodian amphora handles unearthed during the 1931-1933 and 1935 seasons of excavation at Samaria which bear the name ΑΡΙΣΤΕΙΔΑΣ. Presumably all of these occur in the regular formula: preposition, eponym, name of the month. Unfortunately, it is not possible to tell from Crowfoot's list of eponyms whether or not the eponym ΑΡΙΣΤΕΙΔΑΣ was accompanied by the name of a month and if so, which month. We cannot be sure as to which Aristeidas these amphora handles found at Samaria belong. Crowfoot noted that they did not pay proper attention to the shape and technique of the handles, but like their predecessors contented themselves with recording the find spots and the contents of the stamp. Neither was the stratification at Samaria of any help with their dating (Crowfoot, Crowfoot and Kenyon 1957: 379-80). Fraser and Bean (1953) make reference to an inscription (no. 8) which is dated in the term of Aristeidas.

Our dating of ca. 220-180 B.C. harmonizes well with the stratigraphic evidence from Tell Hesban (and indeed contributes to its confirmation), for that evidence strongly implies that the stamped amphora handle under discussion was discarded at Esbus (the contemporary Greek name of Tell Hesban) sometime during the Late Hellenistic period (Vyhmeister, 1968: 164-65; 1989: 10-16). The Greek name continued to be used in the Roman period. It occurs again on coins minted at Esbus in the time of Elagabalus (A.D. 218-222) (Terian 1976: 133-142; Geraty 1974: 5). As already indicated, it was discovered along with ceramic sherds, the latest dating to the Late Hellenistic period, in a gray-black clay layer (Locus B.4:249) which filled a Late Hellenistic period pool; a layer that was covered first by a Late Hellenistic period soil layer (Locus B.4:229) and then by an Early Roman period soil layer (Locus B.4: 228), both of which were sealed by several thin Early Roman period plaster and red soil layers (Loci B.4:227 and 226) (Sauer 1976: 29-62).

We may therefore conclude with some confidence that a potter produced an amphora on the island of Rhodes sometime between the years 220-180 B.C., which he dated in the customary fashion ("in the year in which Aristeidas served as priest of Helios, in the month Sminthios"). Rhodian amphorae regularly had two handles both of which were customarily stamped, the one bearing the name of the priest during whose term of office the potter's license to manufacture such items was obtained and dated, and the other bearing the name of the potter (Grace 1934: 204; 1948: 144; 1953: 117, n.3; and Crowfoot, Crowfoot and Kenyon 1957: 379). Since a relatively large number of complete Rhodian amphorae are preserved, a fair amount of information, which is regularly divided between the two handles, is available (Grace 1934: 204). With respect to the fabricant (potter), one should not imagine a craftsman, like those who signed Attic vases, but a person responsible for the output of standard products, perhaps a pottery operator appointed as a commissioner, similar to bankers who sometimes served as coin magistrates (Grace 1949: 177). Unfortunalely, since only one of the pair of handles from the Hesban amphora was found, we do not know the potter's name. After fabrication, the amphora was then sold to a wine merchant who, in turn, having filled it with Rhodian wine, shipped it to Esbus where its dated handle eventually became part of a soil fill laid down in the

Late Hellenistic period (198-63 B.C.). Though the pottery of Rhodes was fine, its wine was poor (Grace 1934: 199; 1961: 12). It is to be assumed that the amphora under consideration was employed to transport and store wine. However, it may have been used for other purposes. While most Rhodian amphorae were employed for the transport and storage of wine, many were used for the transport and storage of oil, preserved fish, pitch, water, and the like (Grace 1961: 1). The Rhodian amphora handle described above is housed in the Museum of the Department of Antiquities, Amman, Jordan.

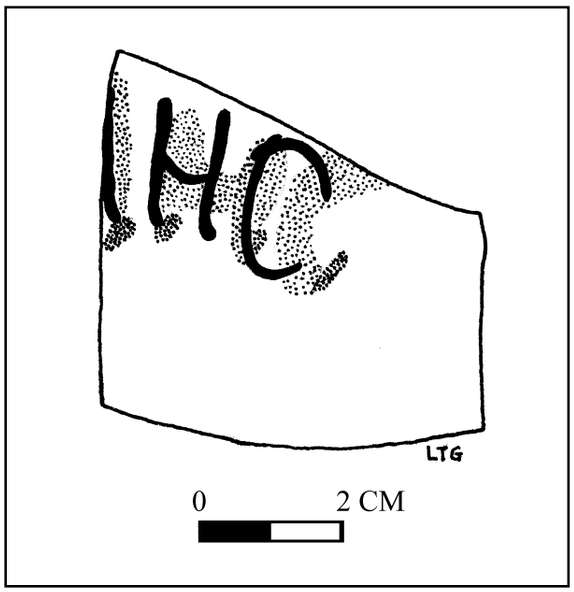
A Second Greek Ostracon From Tell Hesban
(Geraty 1976)

Heshbon Ostracon X (74.1890; HAM 74.0224) was found at Tell Hesban in Locus C.5:70. The ostracon's excavator described its context as a 10 cm deep "hard ashy dark brown soil layer with pebbles and tesserae" in the southwest corner of the square's northern portion (the only portion excavated in 1974). Along with the other sherds of pail 233 which were predominantly from the Byzantine period, but included some from the Late Roman period and a few from the Early Roman period, the locus contained bones of sheep, goats, a pig, a cow, and a donkey. The locus was interpreted to be the bottom soil layer in a Byzantine period dump just to the west of an Early Roman period tower in Squares C.1 and 5.

The ostracon itself was probably already broken on all four sides in antiquity leaving a trapezoid-shaped sherd whose dimensions are roughly 4 × 5 cm (and nearly 4 mm thick). The light red (Munsell 2.5YR6/8) slipped sherd may have come originally from an Early Byzantine period open bowl of fine ware whose interior concave surface may have carried the full painted inscription. Since it is only a body sherd, the author cannot rule out the possibility of a Roman period date for the sherd. In any case, when the bowl (or large sherd containing the inscription) was broken, only the final two letters, with part of a third, remained on the ostracon.

The remaining letters, all in the upper left corner of the sherd, each nearly 2 cm high by 1 cm wide in weak red paint (5R4/4), read: ...[N]HC perhaps the genitive ending of a name like Ιωανης, John (fig. 3.4). An unusual feature of this ostracon is that these fine formal letters are themselves painted over the identical letters executed in a more cursive hand in pinkish white paint (7.5YR8/2) (represented by the stippling behind the letters in fig. 3.4).

Figure 3.4 Heshbon Ostracon X.



Palaeographically, the weak red letters were painted carefully; they are large in terms of size and definable by a rectangle. The *ēta* was executed with three successive brush strokes, each ending in a blob of paint. The *sigma* was completed in two curved strokes, the first starting at the upper right and arching to the upper left, and the second crossing it at the upper left in a downstroke that then curved up to finish at the lower right. The underlying pinkish white letters were painted more cursively; they are squatter in terms of size, the *ēta* definable by a square but the *sigma* by a rectangle. The *ēta* was executed with strokes, the first being the left downstroke, and the second the curved crossbar which moved up to the right and then down again (without lifting the brush from the surface) into the right downstroke, each ending in a paint blob. The *sigma* was completed in only one stroke which began at the upper right (where the ostracon is broken) but angled into a thick downstroke at the upper left shoulder and then finished off at the bottom with an upward flourish to the right.

The best parallels for these letter forms are found in documents broadly dated between the 3rd and 5th centuries A.D.; it would be hazardous to assign an absolute date on the basis of only two let-

ter forms but an Early Byzantine period date in or near the 4th century A.D. for Tell Hesban Ostracon X would not be far wrong. Though parallels could be cited in numerous palaeographical handbooks, examples of the outside limits in terms of dating can be conveniently compared in Seider (1967). P. Berl. 11532 from Theadelphia (Seider 1967: plate 26 opposite p. 83) illustrates comparable formal and cursive hands of the 3rd century A.D. P.Oxy. 1130 from Oxyrhynchus (Seider 1967: plate 34 opposite p. 99) illustrates comparable hands from the 5th century A.D. A formal hand which is very close to that of Tell Hesban Ostracon X is the one found in P. Chester Beatty IV [no. 961] from Aphroditopolis in Middle Egypt. (1970: plate 29 opposite p. 148) dated to the 4th century A.D.

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Chapter Four

AMMONITE OSTRACA FROM TELL HESBAN

Frank Moore Cross

Chapter Four

Ammonite Ostraca From Tell Hesban

Introduction

The excavations at Tell Hesban between 1968-1978 produced a small corpus of six legible ostraca inscribed in the cursive Ammonite script. These ostraca add to our knowledge of the national Ammonite cursive which first appeared in the Balaam Texts at Deir ʿAlla towards 700 B.C. or perhaps a little earlier,[1] and continued in the scripts from Tell Hesban and Tell el-Mazar (Yassine and Teixidor 1986: 45-50).[2] Parallel to the cursive series is an Ammonite formal or sigillary script known from more than 120 seals as well as from graffiti from the Amman Citadel, Tell Hesban (A 7 and A 8 from the seventh century B.C.), the eyes of the double-faced statue from the Amman Citadel, the Amman Theater Inscription,[3] the Amman Statue,[4] and the Tell Siran Bottle inscriptions (Cross 1973a).[5] Not listed here is the Amman Citadel Inscription of the mid-ninth century B.C. While it is written in Canaanite (Ammonite), its script is best labeled Aramaic, from a time before the full emergence of a distinctive Ammonite cursive and formal style.[6] The Ostraca were published in the sequence of their discovery. However, it seems appropriate in the principal publication to rearrange the series in the order of the date of the ostraca (Table 4.1).[7]

Ostracon A1

Ostracon A(mmonite) 1, Registration No. 73.1657, was found July 31, 1973, in Area B, Square 1, Locus 143. Its stratigraphic context is described by the excavator as Iron II/Persian. The upper left side of the ostracon (fig. 4.1) is missing and with it certainly the ends of the first seven lines of script, and perhaps the first eight. The right margin is intact except for a small chip at the very beginning of line 1, where at most a single letter is missing. Both the top and the bottom seem to be the original line of breakage except for minor chips. The piece of pottery is a body sherd taken from a large, fairly rough storage jar. Its surface is not always smooth and frequently contains large calcium grits. The scribe's pen strokes in consequence are broad and sometimes distorted by unevenness or blurred by the spread of the ink. Nevertheless, given sufficient effort, most of the letters in the eleven lines of the inscription can be made out.

The text of the ostracon reads as follows:

1. [*l*]*mlk* . *ʾkl 20+10+5* (*?*) [ ]
2. *wṣn 8* *vacat* [ ]
3. *wlndbʾl bn nʿmʾl m*[ ]
4. *lz*[˚ ˚ ˚] *m̊ʾlt nkʾt 10+2 ʾrkꞌ*[*l*]
5. *l*[˚ ˚ ˚] *nkʾt 2 ʾrḥ bt 2 w*[ ]
6. *lbʿš*[ʾ] *ksp 20+20 ʾš ntn l*[ ]
7. *yn 20+2 wṣʾn 10 lbbt* [ ]
8. *yn 8 wʾkl 6*
9. *lytb dšʾ ʾkl 20+4* (*?*)
10. *ṣʾn 9*
11. *ʾrḥ bt 3*

1. To the king: 35 (jars) of grain [ ]
2. and 8 small cattle. *vacat* [ ]
3. and to Nadabʾel son of Naʿamʾel from [ ]
4. To Z[˚ ˚ ˚] from ʾElath: 12 (measures) of gum; (x jars) of g[rain]
5. To [˚ ˚ ˚] 2 (measures) of gum; a two-year old cow and [ ]
6. To Baʿš[aʾ] 40 (pieces) of silver which he gave to [ ]
7. 22 (bottles) of wine; and 10 small cattle; (x measures) of wheat germ [ ]
8. 8 (bottles) of wine; and 6 (jars) of grain.
9. To Yatib hay; 24 (jars) of grain;
10. 9 small cattle
11. a three-year old cow.

Line 1

The reconstruction [*l*]*mlk* is virtually certain. There is room for only one letter at the beginning of the line. A personal name with *l*, as elsewhere in

Table 4.1. List of New Numbers of Ammonite Ostraca and Graffiti from Hesban.

New No.	Reg. No.	Old No.	Date	Place of Publication
Ostraca				
A1	73.1657	Hesban IV	ca. 600 B.C.	*Andrews University Seminary Studies* 13 (1975): 1-18; pl. 1
A2	74.2092	Hesban XI	ca. *575* B.C.	*Andrews University Seminary Studies* 14 (1976): 145-48; pl.15
A3		Hesban XII	550-525 B.C.	*Archaeology of Jordan and Other Studies* 1986: 475-89
A4	71.0803	Hesban II	525 B.C.	*Andrews University Seminary Studies* 11 (1973): 126-31; pl. 16
A5	68.0309	Hesban I	end of 6th cent. B.C.	*Andrews University Seminary Studies* 7 (1969): 223-29; pl. 25
A6			end of 6th cent. B.C.	Unpublished
Graffiti				
A7	73.1656	Hesban V	7th B.C.	*Andrews University Seminary Studies* 13 (1975): 18-19; pl. 1
A8	73.1676	Hesban VI	7th B.C. (?)	*Andrews University Seminary Studies* 13 (1975): 19; pl. 1

the inscription, e.g., [*lʾl*]*mlk*, cannot be fitted into the space. On the meaning of the phrase, "to the king," see below. We have translated *ʾkl* "grain." Often *ʾōkel* refers to a cereal in the Bible, and at Ugarit. As Hillers (1964: 49) has shown, *ʾakl* evidently means "grain" or even "flour." It is used this way in the Kirta Epic (*CTA* 14. 18, 172), where the parallel term is *ḥṭt*, "wheat." More important for our context is the reference in an economic text: *ʾarbʿm dd ʾakl*, "forty jars of grain" (*KTU* 4.284.3-4). To these references may be added the Canaanite cuneiform tablet from Taanach: "Kôkabaʾ (meted out) to Puʿm 8 *kprt* (vessels) of sifted grain (*ʾakl dk*)."[8] Akkadian *akalu* and *aklu* have developed similar specialized meanings: "bread" and "barley." The number at the end of line 1 is quite uncertain after the clear sign for 20. The upper-left corner is badly chipped. Puech (1985b: 14) has suggested that eight vertical strokes follow the 20 sign (=28). I prefer a reading 20+10+5 (1975: 2-4).

Line 2

Again I prefer the number 8 to the number 9 (Puech 1985b: 14) in line 2. Generally the vertical strokes for the units are written in groups of three for multiples of three. The vague suggestion of a mark (if it exists) between the second group of three and the final group of two is too far separated from either group.

Note that in Ammonite, Semitic **ṯ́* is represented by *ṣ* (*ṣʾn*, "small cattle," i.e., sheep and goats). The vacant space at the end of this line suggests that the list of stores assigned to the crown ends here.

Line 3

The name Nadabʾēl is a popular one in Ammonite.[9] Naʿamʾēl appears elsewhere on a Phoenician seal (Benz 1972: 147), and the element *nʿm* is extremely common in Canaanite onomastica, including Ugaritic, Phoenician, and Hebrew.

We have read the final letter before the break as *mem*. In my opinion the *mem* is certain. Puech (1985b: 14) wishes to read a *kap*. Presumably the home town of Nadabʾēl followed (as is the case of in line 4: *mʾlt*, "from Elat"), and then the commodity and the amount. It is interesting that the most common name in the text, Nadabʾēl, is specified further by both patronymic and place of origin.

Line 4

The initial *zayin* of the personal name expected is all that can be read. Following it is a large blemish which may or may not have contained a letter. After the blemish, traces of ink are discernible but indecipherable. Puech (1985b: 14) suggests *zʾb* which turns up as a Midianite name in the Bible and would fit well with this place of origin in Elath. But there are spaces for four letters. We suggest perhaps, *zbdʾ*, a familiar name of the period. The reading *mʾlt* is not in doubt. The writing *ʾlt* for

Elath, the port and caravan city upon the Gulf of Aqabah, is that expected. The name probably derives from the goddess name, [Bêt] ʾĒlat.

The appearance of the term *nkʾt* in lines 4 and 5 apparently guarantees the reading. We have translated "gum." In Hebrew the term is *nkʾt*, vocalized *nĕkôt*. It appears as an item of merchandise along with balsam and labdanum brought by camel caravan from Gilead (Gen 37:25). Its only other occurrence in the Bible (Gen 43:11) is in a list of gifts to be brought from Palestine to Egypt: balm, honey, labdanum, pistachio nuts, and almonds. The term is probably cognate with Akkadian *nukātu* (*nukkatu*) and with Arabic *nukaʾat*, a biform of *nukaʿat* and *nakaʿat*, gum of tragacnath, an aromatic resin from the shrub *Astragalus gummifer* and *Astragalus tragacantha*, used in food and medicine.

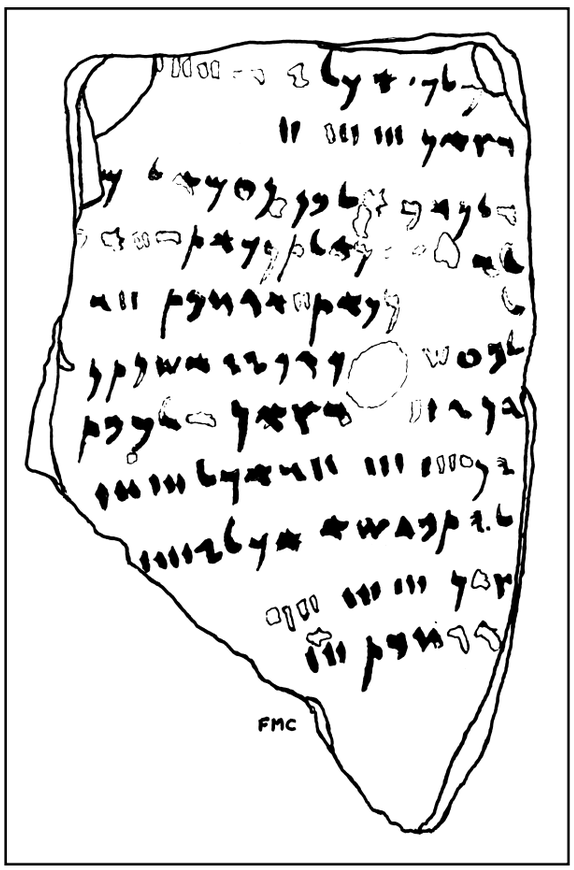
The word following the number of measures of gum begins with *ʾalep*.[10] The following traces fit best with *ʾk*[*l?*], "grain."

Line 5

We can assume that a personal name came after the initial *l*. The traces of ink have virtually disappeared. The second letter of the name, the third after the initial *lamed*, is the best preserved; the traces appear to fit *ʾalep*. *Šin* may follow giving *lʾyʾš*[1], "to Yāʾōš" (Puech 1985b: 13-14).

At the end of line 5 we find the sequence *ʾrḥ bt 2*, and in line 11 *ʾrḥ bt 3*. Puech (1985b: 14) objects to the reading *ʾrḥ bt 3*, especially the *ʾalep* in line 11 where, if one examines the sherd, the defects on the broken edge of the sherd have distorted the letter in photographs. The reading of *ʾalep* in line 5 I regard as certain, and Puech's drawing (1985b: 16, fig. 5) defective. The two readings are the same, and make sense only if we recognize Ammonite *ʾrḥ* as identical with Ugaritic *ʾarḫ* (plural *ʾarḥt*) "young cow," Akkadian *arḫu* "cow," Arabic *ʾarḫ* "young bull," *ʾarḥat* "heifer." The following *bt* 2 in line 5 and *bt* 3 in line 11, are abbreviated forms of *bat šĕnātayim* and *bat šālōš šānōt*,[11] "two years old" and "three years old" respectively. One may compare the biblical expressions *bt šnth* and *bn šntw* "one year old" used of sacrificial animals, Ugaritic *ʿglm dt šnt* "calves a year old" (*CTA* 22.213; 4.6.43) and also *ʿglt mšlšt*, "a three-year-old cow" (Gen 15:9) and *pr mšlš*, "a three-year-old bull."[12] It appears that in antiquity cows aged two or three years were considered ideal for slaughter.[13]

Figure 4.1 Hesban Ostracon A1.



Line 6

The name *baʿšaʾ* is familiar from its appearance as a royal name both in Israel and in southern Syria.[14] On the writing of *ksp* plus number, indeed forty pieces of silver, compare Ugaritic *arbʿm ksp* (*KTU* 4.290.6).

The phrase *ʾš ntn l–* is useful in drawing Canaanite isoglosses. The relative *ʾš* (< *ša*) stands with Phoenician (written both *ʾš* and *š*), the Ammonite of the Deir ʿAlla text (*ʾš*), a seal (*š*) published by Avigad (1940: 243-51; cf. Puech 1985b: 14), and North Israelite, versus Judahite Hebrew and Moabite *ʾašer*.[15] *Natan*, however, sides with Moabite,[16] North Israelite, and Hebrew *ntn* versus the new formation *ytn* in Phoenician and North Canaanite.[17]

Line 7

The spelling *yn* here and in line 8 indicates the contraction of the diphthong *ay* > *ê* as in Ugaritic, Phoenician, and North Israelite. The writing *bn ʿmn* in the Tell Siran Bottle and perhaps in the Amman Theater Inscription (see below) may confirm *bĕnê ʿammōn*. We are accustomed in Canaanite to the diphthongs *ay* and *aw* contracting at more or less the same time. However, in the Tell Siran Bottle we find *ywmt* "days" suggesting that *aw* remained uncontracted at this time in Ammonite.

The word *lbbt*[18] obviously is related to biblical *lĕbībōt*, usually translated "cakes" or "pancakes." In Arabic *libābat* means "fine flour," and the derivation of the meaning as "inner part," hence "choice part" is clear. Similarly in Syriac starch is called *lebbāʾ dĕ-ḥettātāʾ*, "heart of wheat." Hebrew *lĕbībōt* "cakes," then are named from their content, the special flour from which they are made, not their shape. In the present context clearly "fine flour" or perhaps "wheat germ" are better translations than "cakes."

Line 9

The name *ytb* may be a hypocoristicon of a Phoenician name such as *ʿštrty*[*t*]*b*, though the reading is questionable (Benz 1972: 328). There is the name or epithet *ytb* which appears in Talmudic. It is perhaps easiest however to seek an Aramaic etymology, from the root *ytb*, "to sojourn," or better from the root *twb*, "to return, repent."[19]

The word *déšeʾ* "grass," "hay," may be followed by a number; if so, it can be only one or two strokes. There is too little room, even for the symbol *10*. It may be that the amount of hay to be supplied was known (a bale), and hence no number was needed.

Ostracon A 1 preserves a list most easily interpreted as the record kept by a royal steward of the assignment or distribution from the royal stores of foodstuffs, beef and mutton, grain and wine, as well as money and spicery, to the personal household of the king, to courtiers, and to others to whom the crown is under obligation. Since the king is first named, and food, grain, and mutton, in sizable amounts is then listed, we must assume that the king is a recipient of the goods. The king does not pay taxes in kind. The other persons named, therefore, are also recipients of the designated item rather than the names of men credited with taxes in kind sent to the royal stores. The list is a distribution list.

This text so understood is paralleled by many economic texts listing the distribution of food stuffs and various other commodities under the formula *l-* + PN. A number of such texts are known from Ugarit.[20] One may compare the Taint Tablet described above, and more remotely the Tell Qasileh Ostracon: *zhb . ʾpr . lbyt ḥrn š 10+10+10*, "God of Ophir, presented (*ex voto*) to the Temple of Ḥôrôn: š[eqels] 30" (Mazar 1950-51: 194-52, esp. 208 ff.). In the El-Kom Ostraca, Qôsyadaʿ the moneylender notes loans to a person, by *l* + PN, money received in payment from or by *mn* + PN (Geraty 1972; 1975: 55-61 and Skaisst 1978: 106-8).

If we follow the theory of Aharoni and Rainey, the Samaria Ostraca also note distribution of goods from the royal storehouse to officers of the king (Aharoni 1967: 315-27; Rainey 1962; 1967, 1971). However, the Samaria Ostraca present very special problems. I am inclined to regard them as tax receipts. They come from the royal storehouse in the citadel of Samaria and appear now to date from the reign of Jeroboam II in the years 775-769 B.C.[21] The Ostraca contain two groups of men, "*l*-men" (whose names are preceded by the preposition *l*-), and "non-*l*-men." The "*l*-men" repeat, indeed eight of the dozen "*l*-men" appear in the ostraca more than once. Gaddiyaw turns up eight times, ʾAšāʾ eight times. Moreover the "*l*-men" are associated frequently with more than one place or clan. The name of ʾAšāʾ on ostraca are associated with commodities coming from ʾAbīʿezer, Šemīdaʿ, and Ḥeleq. Indeed the place names specify the origin of oil or wine, and may precede or follow the "*l*-man." On the other hand, a place name may identify a "non-*l*-man," which always follows when given. The "non-*l*-men" generally are specified more carefully, often with patronymic, gentilic, or town of origin. They never repeat except with the same "*l*-man," the same district and/or town. In Ostraca 1 and 2, several "non-*l*-men" are listed with the numerals 1 or 2 (jars) following their name. When only one (rarely two) jar(s) are in a shipment, one "non-*l*-man" is named or none at all.

From these data we can make several inferences: (1) "*l*-men" are not tax officials unless one assumes administrative chaos with overlapping districts; (2) "non-*l*-men" are of low status, attached unlike the "*l*-men," to one place or estate and one "*l*-

man," and hence are tenants, clients, sharecroppers, or the like, who actually bring the commodities to the royal storehouse; (3) the small quantity in the shipments suggests that we are not dealing with royal estates or with the total produce of an estate, royal or private.

If these inferences are sound, I believe we must opt for the explanation that most of the ostraca are tax receipts. This fits with the small amount of the shipments. If the documents were inventories of produce of royal estates, the numbers would be far larger. If the documents recorded rations given to a courtier or noble from the storehouse we should expect higher numbers (as in Hesban Ostracon A 1), and more than one or two commodities listed. Moreover, the listing of "non-*l*-men" would be pointless. It does not seem likely either that the Samaria Ostraca record the produce of lands given by royal grant to favored officials. Such produce would go directly to the owner without going through the royal storehouse for redistribution.

However, if we explain the ostraca as tax receipts, their form and content can be comprehended. The shipments come from the estates of landed (military) nobility.[22] These estates were widely-distributed, and non-hereditary lands. One man is listed as owning estates in as many as three clans. The "non-*l*-men" are best understood as tenants or clients or hired men attached to an individual estate who bring the appropriate taxes in kind to the royal storehouse to be credited to their lords (the "*l*-men"). Hence, the transaction is properly recorded with an official date of receipt. The district (clan, village, or estate) is listed precisely or imprecisely since the district in question identifies the quality of the product, especially in the case of aged wine. The listing of the "non-*l*-men" with (usually) a more precise identification than that of the better-known "*l*-men," the grandees of the king, gives proof of the delivery of the wine or oil by the plantation hands or porters. We assume that copies of the tax dockets were returned to the estate owner as proof or delivery and payment of tax. The omission of the name of a "non-*l*-man" on receipts of a single jar or two is understandable, too, since the receipt is proof enough of his delivery of a single load.[23]

The script of Hesban Ostracon A 1 is of great interest in providing an additional cursive exemplar to our small corpus of Ammonite scripts. Sometime after the date of the Amman Citadel text (mid-ninth century B.C.), and before the date of the Deir ʿAlla texts toward end of the eighth or the beginning of the seventh century B.C., the Ammonite script diverged from its ancestral Aramaic tradition and began its own peculiar development. While this typological reconstruction has been questioned by some, the discovery of the Tell Siran Bronze Bottle has made it clear that the Ammonite scribes did develop a national script style. It has also provided a precise date with which to pin down its typological sequence. This date (ca. 600 B.C.) falls within the reign of ʿAmminadab II, the son of Hiṣṣalʾel and grandson of the ʿAmminadab who was a contemporary of Assurbanipal (mid-seventh century B.C.).[24] Further confirmation came from my identification of the seal of Bayadʾel, servant of (king) Padōʾel as Ammonite, and Padoʾel as the contemporary of Sennacherib and Esarhaddon (Cross 1974: 493-94; Bordreuil 1986: no. 69; Aufrecht 1989: no. 13).

A monumental inscription on stone taken from the ruins of the Amman Theater comes from about 600 B.C. or slightly later (Dajani 1967-68: 65-67). Only two lines are preserved:

]*bʿl* . *ʾbn* ⌜*h*⌝ [
]*bn* ʿ*m*[*n*]

]Baʿl . I shall build[
]the children of ʿAmm[ōn]

The letter at the end of the line best fits with lapidary *he*. I think Puech's reading, *dalet*, is very difficult. I am also inclined to read *mem*, not *šin* at the end of the second line (Puech 1985b: 11, n. 29; Aufrecht 1989: 58).

The Baʿl of the first line may well be a divine epithet or the name of the Ammonite king, preserved in the corrupt form in Jer 40:14; *bʿlys mlk bny* ʿ*mn*.[25] The second line contains the spelling *bn* ʿ*m*[*n*], if our reading is correct, the spelling used throughout the Tell Siran text.

These paleographical data require the lowering of the date of the Deir ʿAlla texts to ca. 700 B.C. Evidently the building of the wall on which the inscriptions were penned (or painted) occurred at the beginning of the seventh century B.C., at the start of a new occupational phase; it continued in use into the Persian period. The dating first proposed by some scholars, placing these texts in the early or mid-eighth century B.C., rather identifies the time

when the Ammonite national script style broke free from the main line of evolution of the standard Aramaic cursive and lapidary styles. Among the chief traits of the Ammonite script are its preservation of archaic forms, with *bet*, *dalet*, *reš*, and *ʿayin* remaining closed at the top, *dalet* and *reš* into the sixth century B.C. Other archaic features include the complex *zayin* and *yod* (into the sixth century B.C.), the long-tailed *mem* with zigzag top, and the two-barred *ḥet*. At the same time certain letters evolved in unique ways; most strikingly the *he* of the Tell Siran Inscription (cf. n. 1).

Additional control of Ammonite writing styles is found in the corpus of Ammonite seals which have now been isolated. The task was well-begun by Avigad (1970: 284-95) in his programmatic paper. Later Herr listed some 46 Ammonite seals in his study (1978: 55-78). More than 120 seals identified as Ammonite are listed by Aufrecht (1989), and the corpus continues to grow. Six seals can be narrowly dated by a combination of paleographical, archaeological, and historical data. These include the two seals of "servants of ʿAmminadab" dated to the reign of ʿAmminadab I in the mid-seventh century B.C. (Aufrecht 1989: Nos 17, 40); and the two seals found in the tomb of ʾAdōnīnūr, the official (*ʿabd*) of ʿAmminadab, i.e., one of Šubʾel (Aufrecht 1989: no. 41), and one of Menaḥem ben Yenaḥem (Avigad 1952: 163-64; Aufrecht 1989: no. 42). There is also the seal of *bydʾl ʿbd pdʾl* dating to ca. 700 B.C. (Cross 1974: 493-94; Bordreuil 1986: no. 69; Aufrecht 1989: no. 13). and the seal of *Mlkmʾwr*, servant of *Bʿlyšʿ* from ca. 580 B.C. (Herr 1985: 169-72; Aufrecht 1989: no. 129 and n. 25 above).

The formal Ammonite scripts of the seventh century B.C. are marked by great conservatism, extremely vertical stances, of which *pe* is particularly remarkable (cf. n. 4), and certain innovations which are surprising such as a square-shaped *ʿayin*, a long-legged *dalet* in a vertical stance, and the head of the *mem* which zigzags in the form of a "W." The forms of *ʾalep* (unchanged from the early eighth-century B.C. Aramaic forms), *yod, bet*, the two-bar *ḥet* (becoming a single bar in some seventh- and sixth-century B.C. seal scripts), and angular *lamed* are highly archaic.

Pressures of the cursive on the formal and semiformal (Tell Siran Bottle) styles introduce several changes toward 600 B.C. *Bet* and sometimes *ʿayin* open at the top; *ḥet* may be reduced to one bar as noted above; *yod* is elongated; *samek* exhibits a "Z"-form head; and *qop* opens at the top. Several of these changes are also found in the Aramaic cursive and argillary scripts (Lieberman 1968: 25-31). It must be emphasized, however, that the opening of *bet*, *ʿayin*, *dalet* and *reš*, and the simplification of the one-barred *ḥet* had already taken place in Aramaic cursive scripts by the end of the eighth century B.C., long before Ammonite changed. In the Nimrud Ostracon, for example, written in cursive Aramaic (not Ammonite)[26] of the late eighth century B.C., these changes are fully developed, and in the Assur Ostracon (Lidzbarski 1921: pl. 1; *KAI*: no. 233), of ca. 660-650 B.C., there is no remnant of the archaic forms.

At the same time it is probable that some of the Ammonite changes took place under secondary Aramaic influence. No doubt the Aramaic cursive was known and its script read in Ammon in these centuries.

At present our latest text (Hesban A3) in cursive Ammonite dates from the second half of the sixth century B.C. From the very end of the sixth century or the beginning of the fifth century B.C. come three texts (Hesban A4, A5, and A6), all written in the contemporary Aramaic cursive. So far as the evidence goes, it fits with other data suggesting the general replacement of the older national scripts, Edomite, Ammonite, and Hebrew, by the Aramaic script used universally in the chancelleries of the Persian empire. In the formal (lapidary and especially the sigillary) scripts, Ammonite stylistic traits continue later, but strong Aramaic influence is increasingly obvious. Some circles in Jerusalem and Samaria were even more conservative in that they preserved the Old Hebrew (Palaeo-Hebrew) script after 500 B.C. for special purposes, notably the copying of the Hebrew scriptures, despite its replacement for ordinary purposes by the Aramaic script, which evolved into the Jewish character in the Hellenistic period.

Some brief comments can be made on the script of the Hesban Ostracon A1 in the context of the evolution of the Ammonite character.

ʾAlep in the Deir ʿAlla and Tell Siran scripts, as in the seventh-century B.C. seal scripts and in Hesban Ostraca A7 and A8, retains its traditional eighth-century B.C. form showing little or no change. In the Hesban *ʾalep* the mode of penning of the letter has changed. The two right bars are now penned as a check, or a side-ways "V," the point of the check touching the vertical. Often the check is small permitting the confusion of *ʾalep*

with *waw*. The left bar is a single stroke, made separately, and typically high on the vertical. This form is very like that of the Aramaic *ʾalep* of the Assur Ostracon of the mid-seventh century B.C. and the Saqqarah Papyrus (ca. 600 B.C.) (Dupont-Sommer 1948: pl. opposite 68; *KAI* 266).

Bet in this Hesban list is open at the top. In this it shows a tendency also at work in the semiformal script of the Tell Siran Bottle and in the lapidary Amman Theater Inscription. In Aramaic cursive, the *bet* opens at the top in the late eighth century B.C., and in the following century becomes fully open, more open than in the Ammonite of ca. 600 B.C. The cursive Ammonite of the Deir ʿAlla texts (ca. 700 B.C.) preserves the older, closed form, as do the seventh-century B.C. Ammonite seals.

Dalet and *reš* in Hesban A1 reveal little or no tendency toward opening at the top.[27] In the Tell Siran Bottle Inscription, one *dalet* is slightly open but it is clear that the standard form is closed. These letters stand in opposition to the Aramaic type sequence and leave no doubt of the independence of the Ammonite alphabet over considerable periods of time. *Dalet* and *reš* begin to open slightly in the course of the sixth century B.C. e.g., Mazar 3 (ca. 575 B.C.) and Hesban A3 (550-525 B.C.). Note that in the formal script and in the Deir ʿAlla cursive, the *dalet* tends to be quite elongated.

The letter *he* does not appear in the Hesban A1. A cursive form does appear in Mazar 3. Like the *he* of the Deir ʿAlla plaster texts and the peculiar *he* of the Tell Siran Bottle, it has some features in common with the Aramaic cursive *he*, but also the Ammonite forms share some peculiar features.

The *waw* of the Hesban Ostracon A1 follows precisely in the tradition of the Deir ʿAlla *waw*, which parallels the Aramaic *waw*. The Tell Siran *waw* is extraordinary. Its "Y"-form is found elsewhere only in extremely archaic contexts, notably in the Amman Citadel Inscription of the mid-ninth century B.C., in eleventh century B.C. Phoenician scripts preserved on arrowheads, and in Hebrew on the tenth-century B.C. Gezer Calendar (see n. 6).

In the Deir ʿAlla texts, the Amman Statue Inscription, and in the Tell Siran text, *ḥet* exhibits a two-bar form familiar from the Amman Citadel Inscription, the Mesha^{c} Inscription, and from sporadic forms in eighth-century B.C. Hebrew. Ordinarily in the Aramaic character of the tenth-eighth centuries B.C. *ḥet* is made with three bars, as in Phoenician and (ordinarily) in Hebrew. In the Aramaic cursive script, the three-bar *ḥet* gave way to a one-bar *ḥet* beginning in the late eighth century B.C. The Ammonite cursive in the Hesban A1, A2, and A3 exhibits a developed one-bar *ḥet* in the form of a mirror-image "N." In the Ammonite sigillary script the two-bar *ḥet* appears early, and then gives way to a one-bar *ḥet* appearing sporadically as early as the mid-seventh century B.C.

A formal *yod* persists throughout the main line of Ammonite scripts. It tends to narrow and elongate in the cursive, the semiformal, and in the late seal script as may be seen in the seal of *ʾbyḥy bt ynḥm*.[28] In the mid-sixth century B.C. it further simplifies (e.g., Hesban A3; cp. Mazar 3), probably under Aramaic influence.

The *kap* with a triangular bar high on the left leg is found in the Deir ʿAlla script and persists through the Tell Siran Inscription where it is highly stylized. In the seal scripts the older, lapidary form persists, a leg with a horizontal "V" touching the vertical of the leg at the point of the "V." Hesban A1 has a *kap* in the triangular bar tradition, but the triangle is beginning to lose its form. In Hesban A3 and Mazar 3, the triangular bar has become a crescent, the right side joining at the top of the leg. This form also appears in the Aramaic cursive towards the end of the seventh century B.C.[29]

Mem in the Deir ʿAlla texts preserves the long lines and shallow zigzag head of the dominant, eighth-century B.C. Aramaic form. In the early Ammonite cursive and semiformal, *mem* with the zigzag head and long, very vertical leg is found, as in the Deir ʿAlla cursive. The same form marks the Ammonite lapidary script. A new type of *mem* appears in the cursive of the sixth century B.C. (A3), in which the zigzag head is simplified into a bar cut with a single vertical stroke. A similar form was introduced into Aramaic cursive in the mid-seventh century B.C. (e.g., in the Assur Ostracon), and the late Ammonite cursive was evidently influenced by it.

The letter *samek* is problematical in the Ammonite script. It appears to share a "Z"-headed form with some argillary scripts of the seventh century B.C., and appears sporadically in lapidary texts, including Nerab II of the early seventh century B.C. (*KAI* 226). It is not comparable to the late seventh and sixth century B.C. *samek* of the Aramaic cursive.[30] Unhappily, however, the Tell Siran *samek* is in dispute and the Hesban Ostracon A1 *samek* is badly preserved.

In Ammonite cursive *ʿAyin* is round, but in Ammonite lapidary it is square. The two occur-

rences in Hesban A1 are closed or virtually closed at the top. The *ʿayins* of the Tell Siran Bottle differ from open in varied degrees to closed. The *ʿayins* of the Tell Mazar sherd are slightly open, and those of Hesban A2 and A3 are fully open. One may compare the *ʿayin* of Aramaic cursive which opened toward the end of the eighth century B.C.

Pe is rounded at its top in Ammonite and tends more to the vertical than in the Aramaic scripts of the seventh-sixth centuries B.C.

Qop retains more or less its archaic form in Ammonite, opening at the top (Deir ʿAlla, Tell Siran), but not developing the horizontal "S"-top of the Aramaic cursive of the seventh century B.C. Hesban A3 displays a new development, no doubt developed from the open-top *qop* (and not the "S"-shaped top of the Aramaic cursive form).

Šin shows little development from the ninth-eighth century B.C. Aramaic ancestor of the Ammonite script.

The *taw* in the Deir ʿAlla texts and in the Tell Siran script develops directly from the elongated *taw* of ninth-eighth century B.C. Aramaic. In Hesban Ostraca A1-A3, the cross-bar has moved off to the right, a tendency already developed in seventh century B.C. cursive Aramaic.

The script of Hesban A1 shows itself more advanced than that of the Tell Siran inscription in the letters *ʾalep*, *ḥet*, *kap*, *samek*, and *taw*. Despite its highly cursive style, the *ʿayin* and *yod* are less developed as opposed to the semiformal style of the Tell Siran inscription. In view of the great distance between the cursive of Deir ʿAlla and the cursive of Hesban A1, it is difficult to date the latter earlier than the end of the seventh century B.C., two scribal generations after the Deir ʿAlla texts. In view of internal historical data, the Tell Siran Inscription cannot be lowered much below 600 B.C. These data suggest that Hesban Ostracon A1 is roughly contemporary with the Tell Siran Bottle, from the late seventh or early sixth century B.C.

The language of the Hesban Ostracon A1 adds to the evidence that Ammonite was a South Canaanite dialect closely related to Phoenician, the Hebrew of Northern Israel, and in some features with Judahite Hebrew and Moabite (cf. n. 17).

Ostracon A2

Ostracon A2, Registration No. 74.2092, was found in 1974 in Area B, Square 2, Locus 126, and described by the excavator as in an Iron II/Persian stratigraphic context. Ostracon A2 (fig. 4.2) is small, measuring at its maximum dimensions only 8.4 x 5.4 cm. It was from a body sherd of a heavy storage jar. The right side, with its margin, and the bottom side probably belong to the original ostracon. The break at the top is more recent, perhaps modern. Overall, a considerable portion of the text must be reckoned as missing. The left side of the ostracon is uncertain. It is clear, however, that the ink on the left third of the surviving ostracon was rubbed away almost without trace.

The text reads as follows:

1.	[° ° ° ° ° °]	*tʾn* [	]
2.		*tʾn* ⌜*k* ⌉⌝ [	]
3.		*bʿrm* [	]
4.		*ḫblm* [	]

1.	[ ]	figs	]
2.		figs ⌜t(alent) 1⌝ [	]
3.		beasts of burden [	]
4.		ropes [	]

Line 1

In the margin preceding the letters *tʾn* are a series of marks including vertical strokes. Several may be taken as letter. At the end of the marginal addition it is possible to read] *q̊r̊t̊* ⌉.[.[31] However, the marks are secondary to the larger, thicker script, and may be no more than doodling. In any case no certain reading is possible.

The word *tʾn* is probably complete, a collective equivalent to Hebrew *tʾnym*. One may compare Canaanite *tyn* (the *yod* is consonantal), Ugaritic *tyt* (from **tayyintu*), for example in an inventory: *ḫmšt . kkr . tyt*, "five talents of (dried) figs" (*KTU* 4.203.17 cf. 4.337.26).

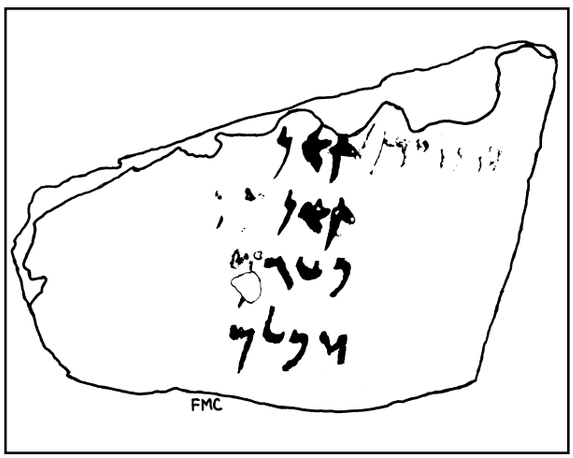
Line 2

The word *tʾn* is repeated followed by what appears to be *k* ⌉, that is *k*[*k*r]*1*, "one talent." Earlier I read *mn*, "from," an alternate possibility.

Line 3

The *mem* of *bʿrm* may or may not belong to the word. *Bʿrm* or *bʿr* may refer to beasts of burden, donkeys or oxen. We have noted that Hesban is on the main caravan routes, which crossed there.

Figure 4.2 Hesban Ostracon A2.



Puech (1985b: 14) reads *nᶜrm*. *Nun* and *bet* are easily confused in this period, but the *bet* of line 3 is virtually identical with the *bet* of line 4, and the tail is rather too curved for *nun*. A reading "lads" is not especially appealing in this context.

Line 4

The term *ḥblm* likely means "ropes" rather than "pledges" or "sailors"! Once again, compare the reading in a Ugaritic inventory: *θmn ḥblm*, "eight ropes" (*KTU* 4.247.30-31).

The script of Ostracon A2 is only slightly less advanced than that of Hesban A3. It is contemporary with the script of Tell el-Mazar, Ostracon No. 3, and slightly more advanced than the script of Hesban A1. *ʾAlep* is virtually identical with that of Hesban A1 and Mazar 3, but less developed than the elongated form of Hesban A3. *Bet* and *ᶜayin* are more open at the top than those of Hesban A1, i.e., closer to the open form of Hesban A3. *Reš* too is opening. *Lamed* is unusually high. The *mem* of Hesban A2 preserves (as does Mazar 3) the archaic zigzag top. The form on Hesban A3 has a single stroke cutting the top bar, indicating movment toward the Aramaic *mem*. Particularly striking is the cursive *ḥet*, a mirror-image "N"-form, more advanced than the forms of Hesban A1 and Mazar 3, and close to the *ḥet* of Hesban A3.

If we have correctly dated Ostracon A1 to about 600 B.C., then Mazar 3 and Hesban A2 must date a generation later, to about 575 B.C., and Hesban A3 in the third quarter of the sixth century B.C.

Ostracon A3

Ostracon A3 (fig. 4.3), was found in 1978, and is second in importance only to Ostracon A1. It was found in Area B when the Iron Age reservoir, filled in the Hellenistic Period, was being cleared to prepare the site for purposes of tourism. Hence, locus and registration numbers for the find were not recorded. The ostracon appears to be complete except for a break on its right side. A long slim triangle of the sherd has split away, beginning at a point opposite line 5 and extending to the bottom of the sherd, cutting off the margin and beginning of the last seven lines of script. The ware is rather coarse. Its surface is weathered, especially at the top, the bottom, and along the left side.

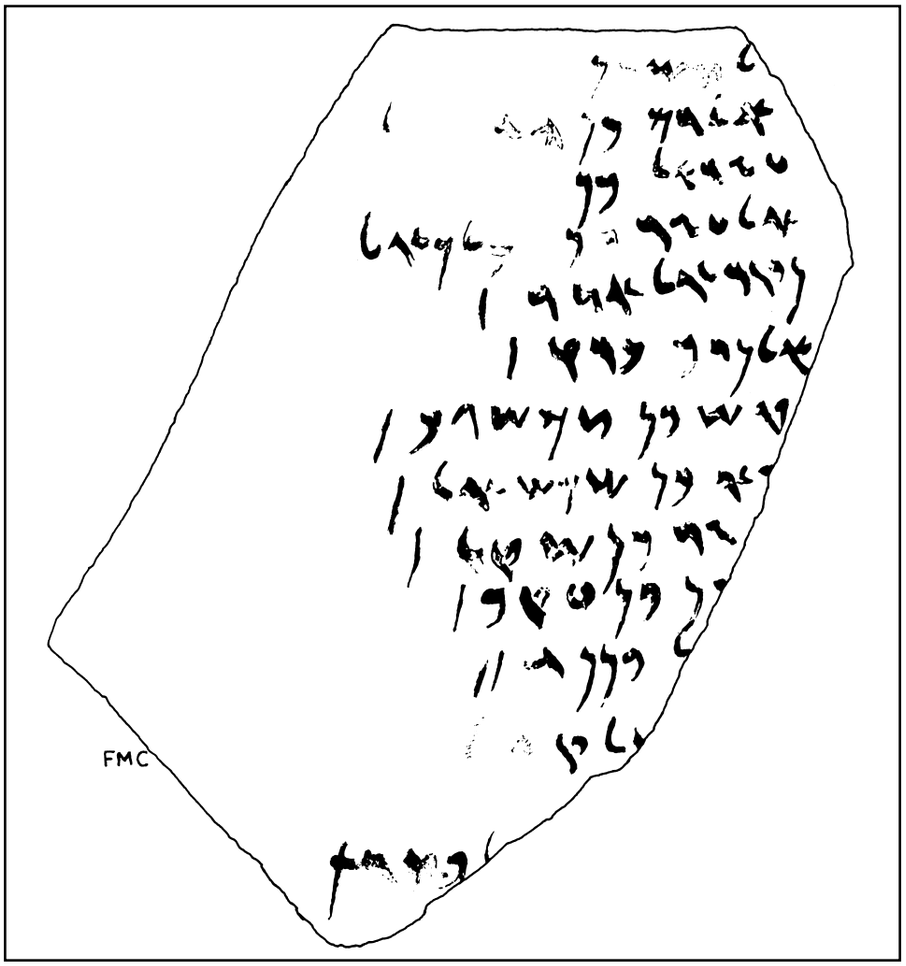
Lines 1-12 consist of a list of names followed (where the ostracon is legible) with numbers. Line 14, inscribed in large letters, ends with *lbṣrt*, presumably the end of a summary notation.

The text of the ostracon reads as follows:

1. *lḫš*[˚]*n*[ ]
2. *ʾlrm bn hẘ*[˚ ˚ ˚] ׀
3. *ᶜzrʾl bn* [ ]
4. *ʾlᶜzr ḫn ṁlkʾl*[ ] ʳ ׀׀ ˈ[ ]
5. *nqr ʾlʾwr* ׀
6. *ʾlndb brq* ׀
7. []*prš bn ḥmšgb* ׀
8. [ ]ʾ *bn šṁšʾl* ׀
9. [ᶜ]*zr bn šql* ׀
10. [ ]*n bin ᶜqb* ׀
11. [ ]*l bnny* ׀
12. [ ]ˈʾˈ*l q*[ ]
13. [ ] *vacat* [ ]
14. [ ]*lbṣrt* [ ]

1. Lōḥēš son of [PN]
2. ʾIl-rām son of Haw[šiᶜ ?]1
3. ᶜAzar-ʾil son of [PN]
4. ʾIl-ᶜazar son of Malkî-ʾil [ ] 2 [ ]
5. Nqr (son of) ʾIlî-ʾūr 1
6. ʾIl-nadab (son of) Baraq 1
7. Parīš son of Ḥamî-šagab 1
8. [ ]ʾ son of šamšî-ʾil 1
9. [ʾIl-ᶜa?]zar son of Šql 1
10. [ ]n son of ᶜAqqūb 1
11. [-ʾIl] (son of) Binōnî 1
12. [ ]-ʾIl (son of) Q[ ]
13. [ ] *vacat* [ ]
14. [ ] to the sheep enclosures [ ]

Figure 4.3 Hesban Ostracon A3.



Line 1

This line is so seriously abraded that the naked eye perceives no letter forms clearly except the initial *lamed*. In the best photographs other remnants of ink may be detected but they are easily confused with surface defects. The second letter has two vertical strokes, and a *ḥet* is easily restored. The third letter appears on first glance to be a *waw*; however, on closer examination a diagonal stroke can be seen forming a "V" on the right side; probably the letter is a *šin*. The final letter preserved on the line is clearly *nun*. The letter between putative *šin* and the *nun* is eroded away. What appears to be a short diagonal (right to left) is in fact a chip which has left a shadow that is not ink on the photograph.

With no little hesitation we are inclined to read *lḥš*[*b*]*n* [ ]: Lōḥēš son of [PN]. This analysis I owe to Naman Avigad. Compare the seal (No. 17) published by Avigad (1969: 7) reading *llḥš* and biblical *Hal-lôḥēš* (Neh 3:12; 10:25). My initial impulse was to read *lḥšbn*, "to Heshbon," as a heading to the accounting. One would suppose that the personal name, in the pattern of the following personal names, is to be preferred as the more banal reading.

Line 2

The first name *ʾlrm, ʾil-rām*, is known from two Ammonite seals.[32] It occurs also on a Hebrew seal (Herr 1978: no. 153). The name is long-lived in the

West-Semitic onomasticon. Compare Mari *ì-lí-ra-am* (Huffmon 1965: 262), Ugaritic *ʾilrm*, *ilu*(AN)-*ra-mu* (Gröndahl 1967: 182), Taanach *e-lu-ra-ma* (Tallqvist 1914: 73), and Old South Arabic *ʾlrm* (Ryckmans 1934: 2.30).

Bn, "son" appears here, as regularly throughout the ostracon. The patronymic is *hw*[˚ ˚ ˚], perhaps *hwšᶜ* followed by the numeral one most probably, or possibly by the letter *lamed*. In the latter case, perhaps *hw*[*šᶜʾ*]*l* should be reconstructed.

Line 3

The first name is the familiar *ᶜzrʾl*, *ᶜazar-ʾil* or the like, found also on another Ammonite seal (Aufrecht 1989: no. 46). It is frequent in the Bible. The end of the line is completely abraded.

Line 4

The name is complete: *ʾIlᶜazar* son of *Malkîʾil*. Both are familiar biblical names. The former can be vocalized *ʾilᶜazar* or *ʾilîᶜizir* (biblical *ʾelᶜāzār* or *ʾĕlîᶜezer*). It appears on an Ammonite seal,[33] as well as on two post-Exilic Judean bullae bearing Hebrew names inscribed in lapidary Aramaic (Avigad 1976: nos. 9, 11). Faint traces of ink follow the second names, best fitting with the number 1+1.

Line 5

The reading *nqr* is certain. The *qop* appears also in lines 6, 9, 10, and 12. It is a characteristic Ammonite form, allied with other less developed Ammonite forms, but quite distinct from the contemporary Aramaic cursive (see below). The final letter is *reš*, not *dalet. Dalet* is very short in sixth century B.C. Ammonite scripts (see the form in line 6, and in Ostracon A1). As for the name, one may compare the Arabic *nqr*, written in cuneiform *ni-qu-ru* (Zadok 1977: 222 cf. parallels 205). If the root is Semitic *nqr*, "gouge out," the name may be a nickname meaning, "one whose eye is gouged out," "one-eyed." It is also possible to compare *nqr* in the Deir ᶜAlla texts. Generally *nqr* is derived from Semitic *nḏr*, Hebrew, *nēṣer* "*scion*." However, elsewhere in Ammonite (Hesban A1), Semitic *ḏ* is represented by *ṣ*, e.g., *ṣʾn*. For an alternate suggestion cf. O'Connor 1987: 60-61.

The patronymic follows on the first name without the element *bn*. The same usage, familiar from contemporary seals, appears also in lines 6, 11, and 12. The reason for the alternation here is obscure. The second name, *ʾlʾwr*, *ʾilîʾūr*, is written with the *mater lectionis waw*. The name, similarly written, is found on an unpublished Ammonite seal in the collection of the Harvard Semitic Museum as *lʾlʾmt bn ʾlʾwr*. The name may be compared with biblical *ʾûrîʾēl*, *ʾûrîyahû*, etc. A clear vertical stroke follows the name.

Line 6

The reading *ʾlndb brq 1* (*ʾil-nadab* [*bin*] *baraq*) is materially certain. The name *ʾlndb* is found on other Ammonite seals (Aufrecht 1989: nos. 64, 108, 142). The element *ndb* is very frequent in Ammonite personal names including such names as *ᶜmndb*, *ndbʾl*, and *ʾbndb*. The name *brq* is found on an Aramaic seal (Herr 1978: Aramaic no. 78), and, of course, is familiar from biblical *Bārāq* and *Bĕnê Bĕraq*. Indeed the element is widespread in the West Semitic and South Semitic onomastica (Jackson 1983b: 507-21).

Line 7

The broken edge of the ostracon here begins to cut into the lines of writing. The first name may be complete: *prš*. The first letter and last letter are perfect. The head of the *reš* is blurred, but no other reading fits the traces as well. One may compare biblical *péreš*, probably mispointed, to judge from Greek transcription, and from the unfortunate meaning (1 Chr 7:16). Zadok suggests that Neo-Assyrian *pa-ri-su* stands for Aramaic *parīš* (Neo-Assyrian *s* is the normal transcription of West Semitic *š*). He compares Jewish Aramaic *pĕrīšāh*. The name then would mean "separated," "distinguished," "wonderful" (Zadok 1977: 127). Less likely, in my opinion is the suggestion to equate the name with *parrāš*, "horseman" (Jackson 1983b: no. 93).

The second name is of some interest. The first element is clearly *ḥam* or *ḥamî*, "father-in-law" or "my father-in-law." The element is theophoric, referring to the Divine Kinsman. It appears on two seals bearing feminine names: *ḥmyᶜdn* and *ḥmyʾhl* (Avigad 1975: 66, nos. 1, 33 and 34). Note also the feminine biblical name *ḥmyṭl* [incorrectly *ḥmwṭl*] (2 Kgs. 23:31; 24:28; Jer 52:1). Compare Amorite *ḫa-mi-i-ba*-[*a*]*l*, *ḥamî-baᶜl*,[34] and Liyanite *ḥmʾl* (Ryckmans 1934: 1.229). The second element of the name *šgb*, *śagab*, "to be high," "exalted," is

well known, and appears on the Ammonite seal of *ʾlšgb* (Aufrecht 1989: no. 9). The hypocoristicon *śĕgûb/śĕgîb* appears in the Bible.[35]

Line 8

The first name is broken off. A remnant of a letter is on the sherd's right edge, followed by *ʾalep*, presumably a hypocoristic ending. After *bn* we read *šmšʾl*. The *mem* is poorly preserved, but virtually certain. On the name *šamšī-ʾil*, see ᵈ*sam-si*-AN, *šam-si*-AN, *tam-meš-i-lu* (Tallqvist 1914: 215a; Zadok 1977: 39-42). If the name follows the usual pattern, we should render "ʾEl is (my) sun." Less likely it can be read "*Šamš* is (my) god." Compare Canaanite and/or Amorite *šapš/sams-haddu/dagan,* that is, "Haddu/Dagan is (my) sun."

Line 9

The first name ends in [ ]*zr*; [ʾlᶜ]*zr* or the like would fit. A slight trace of an ᶜ*ayin* may appear on the edge. After *bn* we have the element *šql*. In 1986, I suggested that it may have the meaning "weighty, precious" found in such Neo-Punic expressions as *trbt šqlt*, "precious offspring."[36] An alternate, perhaps preferable explanation has been proposed by O'Connor drawing on Amorite names which use this root, suggesting that the name is a hypocoristicon for the name form DN + *šql*, "DN has weighed out."[37]

Line 10

The end of the first name is on the edge of the sherd, and consists of a smudge of ink followed by a *nun*. After *bn*, ᶜ*qb*, ᶜ*aqqūb* or ᶜ*aqab* can be read. Names utilizing this root, "to protect" are ubiquitous in this period, in Hebrew, at Elephantine, in Mesopotamia (in West Semitic names, cf. Coogan 1976: 80-81), and at Samaria.[38] In the second millennium B.C. the root is especially productive in the Amorite onomasticon (Gelb 1980: 265-66). Further afield, it appears in names in Old South and North Arabic (Ryckmans 1934: 2.110), and in names that are probably Arabic at Palmyra and Hatra, and in Nabataea (Stark 1971: 107).

Line 11

The first name is broken off except for the letter *lamed*. The element *bn* is omitted before the patronymic as in lines 5, 6, and 12. The second name is *bnny*. This name may be analyzed as a double diminutive of *bn*, "son": *binōnî*, roughly "little sonny" or "sonny boy."[39] Much less likely would be to analyze the name as *bin-Nanay*, "son of the (goddess) Nanay." Nanay appears in a Babylonian name at Hesban (Ostracon A5). An Aramaic equivalent appears at Hatra: *br-nny* (*KAI*: 237:1). To return to the first alternative, we may compare biblical *bnynw* (Neh 10:14), which, given the confusion of *waw* and *yod* in the Hasmonaean and especially the early Herodian period, may reflect an original **bnwny*.

Line 12

The name ends in]ʳʾˀ*l*, presumably one compounded with the divine name ʾEl which dominated the Ammonite onomasticon. *Bin*, as on other lines, is omitted. The second name begins with *qop*. Traces of letters follow, but none can be read.

Line 13

This line or space is blank, suggesting that the list ends with line 12. This suggestion is reinforced by the fact that line 14 is written in a larger hand.

Line 14

On the edge of the sherd a clear but broken *lamed* can be read. The last line of the ostracon thus ends with the reading]*lbṣrt*, *la-buṣarōt*, "to the (sheep) enclosures," comparing Mic 2:12; *ṣōʾn boṣrāh. Bṣrt* could be a place name. It is also conceivable to vocalize *la-bōṣirōt*, "to the grape-gatherers." The latter reading is awkward, however, in view of the list of masculine names.

The script of the Hesban Ostracon A3 stands at the end of a series of cursive scripts of Ammonite Transjordan that share a cluster of typological features which differentiate them from the main line of the development of the Aramaic cursive. A number of Ammonite peculiarities have disappeared, displaced by changes we associate with the mainstream Aramaic cursive script. It has not, however, fully merged with the Aramaic cursive that becomes the chancellery hand of the Persian Empire by the end of the sixth century B.C. We are inclined to date the ostracon to the third quarter of the sixth century B.C. Three ostraca from Hesban (A4, A5, and A6), come from the end of the sixth

century B.C. While they contain Ammonite names and lexical elements, their scripts are virtually or wholly indistinguishable from the Aramaic chancellery hand of about 500 B.C. This replacement of a national script has its analogs in the replacement of Hebrew and Edomite by the Aramaic scripts—lapidary and cursive—in the same general period. In the case of Hebrew, the archaizing "Palaeo-Hebrew" script[40] survived and became resurgent in the fourth century B.C., probably about 350 B.C., when there was general revolt in Phoenicia and Judah, and especially in the Hellenistic and Roman periods. However, there is no evidence that the Transjordanian scripts, including Ammonite and Edomite, survived the late sixth century B.C.

Some brief comments on the script of Ostracon A3 are herewith appended, particularly in its relation to earlier ostraca in the Ammonite cursive.

ʾAlep, notably the form in line 6, is elongated, not so squat as the forms in Hesban A1 and A2. The short horizontal stroke to the left of the vertical is moving up almost to the top of the vertical. Compare the Bauer-Meisner Papyrus (515 B.C.) (Bauer and Meissner 1936: 414-24, pls. 1-2), and later sixth century B.C. Aramaic cursives.

Bet tends to open farther at the top as in the standard Aramaic cursive.

Gimel is archaic (or Ammonite) in its long right leg. Its left leg is short.

Dalet is very small and short-legged compared with *reš*, which is an Ammonite feature. However, in Hesban A3 the head is opening.

Zayin has kept its "Z"-form as in the Deir ʿAlla and Hesban A1 scripts. This is a survival of the Aramaic lapidary form in the Ammonite cursive long after it had disappeared from the standard Aramaic cursive.

Ḥet is a mirror-image "N" form. In the Deir ʿAlla and Tell Siran scripts the (typologically) older two-bar *ḥet* survived. The form in Hesban A3 is much like those in Hesban A1 and A2. A tendency toward this form can also be found in the Ammonite seal scripts. The Hesban A3 *ḥet* is developed beyond the Hesban A1 type, in the cursive curving of its verticals. Both forms are advanced beyond the prototype one-bar *ḥets* with the bar slanting downward and striking the left leg below its top in the lapidary script.

Yod in Hesban A3 is much advanced beyond the Ammonite *yod* of Hesban A1. It is reminiscent of the large, simplified *yods* of the sixth century B.C. Aramaic cursives, and of Hesban A4, A5, and A6.

Kap in the Hesban A3 script shows no development beyond that of Hesban A1; both are cursive forms which have evolved beyond the *kap* of the Deir ʿAlla texts.

Mem in the script of Hesban A3 reveals the most significant innovation. The shallow-toothed (or zigzag) head of the Deir ʿAlla *mem* persists in Hesban A1 and A2 and may be compared with the form on the Tell Siran Bottle (and more remotely with *mem* in the Ammonite seal scripts). It is not found in Aramaic cursives after the eighth century B.C. The shallow line of the head is preserved, but the "teeth" are replaced by a center stroke breaking, though downward. This change follows the direction taken earlier by the Aramaic cursives (seventh century B.C.).

ʿAyin in Hesban A3 has opened at the top. This is unlike the closed forms of Hesban A1, but much in the fashion of those of Hesban A2 and A5. This tendency in scripts of Ammonite provenance is also found on the Tell Siran Bottle and in the Amman Theater Inscriptions (both ca. 600 B.C. or slightly later).

Qop in Hesban A3 displays a unique form. It appears in lines 5, 6, 9, 10, and 12, so that we know the scribe's intent. It is quite different from the Aramaic cursive *qop*. The vertical is doubly curved when properly penned (lines 5, 6, 9, and 12). A semicircular stroke is made on the right, usually not touching the leg. It appears to be derived from the open *qop* of the Deir ʿAlla and Tell Siran tradition. The typical *qop* of the Aramaic cursive is an "S"-shaped head with a straight vertical below and appears on Hesban A6 (end of the sixth century B.C.).

Reš is open at the top like *dalet* (see above), but unlike the form on Hesban A1.

Šin retains its archaic form on Hesban A1, A2 and A3. This form disappeared from the Aramaic cursive about 600 B.C.

Analysis of Hesban A3 indicates that it should be placed in sequence after Hesban A1 and A2, but before Hesban A4 and A5. It retains Ammonite features in some letters (particularly *zayin*, *ḥet*, and *qop*); while others (*ʾalep*, *bet*, *dalet*, *yod*, *mem*, *ʿayin*, and *reš*) were evolving toward forms found in cursive Aramaic a century or more earlier. Evidently, the Aramaic cursive tradition was strongly influencing local scribes, and by century's end (as in Hesban A4-A6), the Aramaic chancellery cursive had prevailed.

Ostracon A4

In the 1971 season a small ostracon was found in the excavations at Tell Hesban. It is writen in the Aramaic language in its cursive script. The sherd, Object Registration No. 71.0803, came from Area B, Square 1, Locus 90, in a late Iron II (7th-6th century B.C.) stratigraphic context. At its maximum dimensions, Hesban A4 (fig. 4.4) measures 3.25 x 4.20 cm. Only the right side of the ostracon preserves an original edge. Remnants of lines can be detected at the top and bottom of the ceramic fragment. There are broken letters on its left margin, indicating that this side is missing. Thus we possess only the central, right side of the original ostracon, with three legible lines.

The reading of the brief text can be reconstructed as follows:

1. [ ]˚[
2. *skt pḏ*[*nˀ*
3. *tmkˀ*⌜*l*⌝[
4. *bny gbl*⌜*ˀ*⌝[
5. [˚ ˚ ˚][

1. [ ]˚[
2. plough tip
3. Tamakˀel
4. men of Gublaˀ
5. [˚ ˚ ˚][

Line 1

The first line survives only in a smear of ink on the left edge of the top of the sherd. Clearly the tail of a letter extended below the (theoretical) baseline of the script.

Line 2

The script of this line is written with a dry pen, giving the letters a narrow, long appearance. The initial *samek* is slightly blurred, but still quite certain. The following letters *kap*, *taw* and *pe* are very clear. The tail and a small remnant of the right upper tick of the *Dalet* are preserved; but the context suggests reading *padānāˀ*, "plough" after the word *sikkat*; hence "plough tip." The idiom *sikkat padānāˀ* meaning "plough tip" or "plough coulter" is found in a number of Aramaic dialects including Palestinian Aramaic, Christian Palestinian Aramaic, Samaritan Aramaic, Mandaic, and Syriac. The term *sikkat* or *sekkat* is a loanword from Akkadian into Aramaic and appears to be absent from other Northwest Semitic languages (S. Kaufman 1974: 91), suggesting that the language of the ostracon is Aramaic.

Figure 4.4 Hesban Ostracon A4.

Line 3

Taw, *kap*, and *ˀalep* are standard Aramaic characters. The *mem* is somewhat unusual but is known from such texts as Sachau Papyrus 22 (Sachau 1911: pl. 24)[41] and causes no difficulty. Only the characteristic tail of *lamed* is preserved on the left edge of the ostracon, but the reading is not in doubt. The personal name *tmkˀl*, "ˀEl has supported," as well as *ˀltmk*, and *tmkˀ* are familiar from Ammonite seals of the same general period. Aufrecht lists eight Ammonite seals bearing the name *tmkˀl*, and these do not exhaust the list (Aufrecht 1989: nos. 1, 3, 14, 26, 84, 86, 113, 132; cf. Herr *et al*. 1991: 175, pl. 1). Obviously the name *tmkˀl*; and the element *tmk* were extremely popular in the Ammonite onomasticon.

Line 4

A trace of an *ʾalep* on the lower left side of the *lamed* is visible. Puech (1985b: 20) suggests that the letter is *yod*; while it is possible to read either *ʾalep* or *yod. Bny gblʾ* is more plausible than a reading *bny gblyʾ*. The *bny gblʾ*, "the men of Gublāʾ," members of the tribe or nation *Gĕbal* (< **gubal*) living in conjunction with the territory of Edom, is well known from the Bible, from Psalm 83, where they are mentioned in parallelism with Edom, Ishmael, Moab, the Hagarites, Ammon, and the Amalekites. Josephus (*Ant* 2.6; 3.40) gives the name Γοβολιτις for a district in Idumaea. In Jewish Aramaic the forms *gblʾ* and *gblnʾ* appear (Mazar 1954: 2.403-4).

It is unlikely that the reference is to the "men of Byblus" in Phoenicia. Usually, the element *bny* specifies people of a nation state (i.e., a state arising from a kinship group) rather than of a city state.

Line 5

The faint traces of a fifth line of script appear on the abraded lower edge of the sherd. No single letter can be read with certainty. *Mem* may be read as the second letter from the right margin. On the far left, as the slant of the line moves off the ostracon, the top of a letter conforming to the shape of *ʾalep* may be seen.

The script of the ostracon has strong ties to the squat, broad style that marked the Aramaic cursive in the seventh and sixth centuries B.C., dying out most probably in the second half of the sixth century B.C. The best known representatives of this style are the Assur Ostracon (7th century B.C.), the Saqqarah Papyrus (end of the 6th century B.C.), a tablet published by Starcky (1960: 101; cf. *KAI* 227) from the 34th year of Nebuchadnezzar (571/70 B.C.), Sachau Papyrus 30 (Cowley Papyrus 1) (Sachau 1911; Crowley 1923), from 495 B.C., and Hesban A5 (end of the sixth century B.C.) below.

Some letters (*ʾalep*, *gimel*, *yod*, *kap*, *lamed*, and *nun*) in Hesban A4 conform to 6th- and early 5th-century B.C. types. Others (*bet*, *mem*, *samek*, *pe*, and *taw*) have a range no later than the sixth century B.C. (Cross 1973c: 129-30). The script as a whole shows evidence of the transition from the "squat" to the classic, elongated and shaded cursive which took place in the second half of the sixth century B.C. A date of ca. 525 B.C. is likely.

The ostracon may be a docket recording the distribution of tools, or a letter giving instructions to agricultural workers. It is too badly broken to draw any precise conclusions. Its script is Aramaic, as we have seen, and such forms as *skt pd*[*nʾ*] and *gblʾ*, if we have read them correctly, suggest that the language is Aramaic rather than Ammonite. At the same time, the mention of Tamakʾel, a popular Ammonite name, and of members of the Edomite tribe of Gebal guarantee its local origin. The sherd has special interest in registering the earliest, extra-biblical occurrence of (southern) Gebal.

Ostracon A5

A small ostracon in Aramaic script was found in the first season of excavations at Hesban in the summer of 1968 (Aufrecht 1989: no. 65). The sherd (68.0309), came from Area B, Square 1, Locus 52, at the lowest level reached in the 1968 season, and was associated with pottery dating for the most part from Persian times. A small amount was dated to Iron Age II.

The sherd as presently preserved measures 5.4 x 5.3 cm at its largest dimensions. Unfortunately, it is broken on three sides as can be judged from the incomplete text that is on the top, bottom, and left side. The right side is intact in view of the calcium deposits on its edge and its parallelism with the right margin of the lines of script. The surface of the ostracon is marred by three gouges, no doubt from the blows of the workman's pick. These appear black on the photographs, but can be distinguished clearly from ink marks with the naked eye. In the drawing (fig. 4.5), the gouges (two on line 3, and one on line 4) are marked with dotted lines. Shaded areas within or adjacent to the dotted lines are remnants of ink.[42]

The text of the ostracon reads as follows:

1. *bn l*˚[
2. *ʿzyʾ*[*l*
3. *bn ŕpʳʾʾ*[
4. *bn pšmy* [
5. *nnydn* ׀ [

1. Bin L˚[
2. ʿUzzîʾē[l
3. Bin Rapʳaʾʾ[
4. Bin Pšammî [
5. Nanāyiddin 1 [

Figure 4.5 Hesban Ostracon A5.

Line 1

The *bet* of the word *bin* is marred at the top by a deep chip in the potsherd which obliterates the right shoulder of the letter. *Lamed* is partly defaced, but still certain. Puech (1985b: 20) has proposed to read a *ṭet*, but the lower horizontal stroke is produced by a blemish. In any case the *ṭet* of this period looks nothing like his drawing of the letter. Remnants of a very faint and indeterminate letter, and a chipped edge follow the *lamed*.

Line 2

The broken *ʾalep* at the end of the line appears to be certain. In this case the reading *ʿzyʾl*, *ʿUzzîʾēl* imposes itself (Jackson 1983b: no. 78).

Line 3

Following *bn* is a long gouge in the sherd. Ink remnants preserved at the top of the gouge appear to fit *reš* or *dalet*. A faintly-preserved but certain letter *pe* follows it. Both letters are misrepresented in Puech's drawing (cf. n. 42). On the left edge of the line is a stroke which conforms best to *ʾalep*, but is quite uncertain. The common names *Rapāʾ* or *Rĕpaʾēl* are possible reconstructions.

Line 4

The reading *bn psmy* is clear despite the gouge which largely obliterates the *samek*. There is ink on the top left of the indentation following the curve of the *samek*. Almost all of the lower, rounded sweep of the letter is visible. Puech's drawing (1985b: 17, fig. 7b) is misleading. The name *psmy* (Psammî) is well known from Egyptian and Egyptian Aramaic texts. It appears to be a hyporisticon of *pꜣ-ś-n-mṯk*, written *psmšk* in Aramaic (Kornfeld 1978: 91).

The Psammî of the Hermopolis papyri is the son of Nabūnatan (*nbwntn*; the name is Aramaean despite the Babylonian divine name), the father of Makkibānīt (< Mankkibānīt) and Waḥpereʿ (Egyptian Hophra/Apries) (Milik 1967: 547-49). The Psammî of the Brooklyn Papyrus is the father of ʿAttarmalkî. We shall return to this curious mixture of Babylonian, Egyptian, and Aramaean names found in Egyptian Aramaic texts and in Hesban Ostracon A5.

Line 5

This line with its name and number is apparently the only complete line on the ostracon. It is clear that the original ostracon consisted of names and numbers, evidently a record of payment or rations, or a record of goods shipped or received. The name Nanāyiddin was a fairly common name in Babylonia in the sixth century B.C. The name is written *na-na-a-iddin* (Tallqvust 1905: 159). It is a transparent formation composed of two familiar elements: 1) the name of the goddess Nanāy,[43] popular in Neobabylonian, Persian, and Hellenistic times as Nabū's consort, both in Babylon and among the Aramaeans, and 2) the familiar onomastic element *iddin*, "has given" from *nadānu*. One may compare such names as *nnyḥm* (Kornfeld 1978: 62) and *br-Nny* (*KAI* 2.94).

The script of Hesban A5 can be compared palaeographically with the scripts of the Hermopolis papyri from the last quarter of the sixth century B.C. (Bresciani and Kamil 1966: 12.5.361-

428, pls. 1-10), the Bauer-Messner Papyrus (515 B.C.) (Bauer and Meissner 1936: 414-24, pls. 1-2), Sachau Papyri 22 and 30 (Cowley 52 and 1) (Sachau 1911: pls. 24 and 30; Cowley 1923: 1-3; 156-57) from the late sixth century B.C., and the inscriptions of Šeiḫ Faḍl (early fifth century B.C.) (Naveh 1970: 40-41).[44]

ʾAlep in line 2 is broken. However, it is clear that the form is that of the sixth-century B.C. Aramaic cursive. This form with its right stroke in the form of a horizontal "V" persisted in the chancellery script[45] of the fifth century B.C., but was replaced in ordinary cursive by a form with a more or less vertical right arm.

Bet is still quite elongated as in late sixth-century B.C. styles. The top preserves a narrow form with sharp, upwards ticks on either side.

Dalet has two notable features. The bold slant of its right leg from left down to the right, is a trait of seventh- and eighth-century B.C. styles, and the stubbiness of the form is an early (pre-fifth century B.C.) trait.

Zayin in line 2 is broad at the top and angled left to right. This is a very archaic form, much like that of Cowley Papyrus 52 and earlier hands.

The *Yod* in Hesban A5 is very large, composed of two separate strokes, the left stroke being drawn from right to left. By the beginning of the fifth century B.C. there was a strong tendency to draw the letter without lifting the pen in the ordinary cursive, hence, it grew progressively smaller. There was also a tendency for the left stroke to move upward from right to left, as it appears in the Bauer-Meissner Papyrus. The *yod* of line 2 shows a slight movement in this direction. Cowley Papyrus 52 and earlier hands are closest to the form on Hesban A5.

The stance of *lamed* shifted from a slant down right to left (before the broad semi-loop) in the sixth century B.C., to a stance close to the vertical in fifth-century B.C. hands. The form of Hesban A5 is of the earlier type. Compare especially the Hermopolis forms.

Mem is one of the best letters for dating, having a complex evolution from the seventh to the fifth centuries B.C. Seventh- and sixth-century B.C. forms are characterized by the right down-stroke moving straight, uncurved from a squarish shoulder downward. The left down-stroke is relatively short, beginning well above the horizontal. The form in Hesban A5 finds close parallels as early as the Saqqarah Papyrus (shortly before 600 B.C.), and as late as Cowley Papyrus 1 (cf. photograph in *KAI*.3: pl. 33).

ʿAyin is characterized by its near circular form and small opening to the top. Its traits are relatively early typologically, though such forms may appear sporadically well into the fifth century B.C.

Pe in each example exhibits a rounded head and slightly curved down-stroke. One may compare the form of Hermopolis Papyrus I, 5 which is identical. The lower curve develops in the sixth century, and continues through the fifth century B.C.

Unfortunately, the form of *samek* in line four is too uncertain to be analyzed palaeographically.

This palaeographical analysis has revealed that most of the letter forms (*ʾalep*, *ḥet*, *mem*, and *pe*) of Hesban A5 can be assigned to a date shortly before or shortly after 500 B.C. Several letters (especially *zayin*, *lamed*, and *dalet*) are typologically earlier. We prefer a date in the last quarter of the sixth century, or 500 B.C. in round numbers.

The most striking feature of Hesban A5 is its mixture of names, two West Semitic, one Egyptian, and one Babylonian. As we noted, a similar mixture of names occurs in the Aramaean and Jewish populations of Egypt in the Persian period. One suspects that Psammī may not have been a native Egyptian, nor Nanāyiddin a Babylonian. Rather they may have been Aramaeans, Ammonites, or Aramaized Arabs who moved over the caravan routes (the King's highway connecting with North Arabia and the Gulf of Aqabah in the south, to Rabbat Ammon and Damascus in the north, and the westerly road to Jericho, Jerusalem, and Joppa) that crossed at Hesban.

Another significant feature of this ostracon is its use of the Canaanite (Ammonite) element *bn* with West Semitic, Egyptian, and Babylonian patronymics. The scribe, while using an elegant Aramaic cursive script, was writing in his native dialect, that is in Ammonite. One may compare the similar use of the Aramaic script for writing Hebrew in Judah in the era of the Restoration, e.g., *šlmy hʿd* "Shelomay, the notary" (Cross 1969b: 26-27 cp. Aufrecht 1989: no. 66).

Finally this ostracon contains three names consisting simply of *bn* plus patronymic. This phenomenon has produced some confused speculation in biblical studies, notably the notions of Albrecht Alt. Naveh has shown that this phenomenon is wide-spread in biblical and epigraphic Hebrew lists, as well as in Ugaritic (Naveh 1990: 108-23). Hesban A5 provides one more example of the prac-

tice of using informal names or nicknames in place of full, formal names.

Ostracon A6

This ostracon (fig. 4.6) was found in the summer of 1978, and is published here for the first time. Like Hesban A3, it was found in Area B when the Iron Age reservoir, filled in the Hellenistic Period, was being cleared to prepare the site for restoration. Therefore, there are no locus or registration numbers for the find. The sherd is broken on the right, on the bottom, and probably on the left.

The text of the ostracon reads as follows:

1. []*bn qšmlk*
2. [ʾ]ʿ*lntn bʾl ngyd* [
3. [ʾlʾ?]ʳmʾ*ṣ bn plṭʾ*
4.] ˚*b*[*n*?] ˚ ˚[

1.] son of Qôś-malak
2. [ʾE]ʿl-natan (son of) Bi-ʾēl, commander of [
3. [ʾĒlʾa?]ʳmʾōṣ son of Palṭaʾ[
4.] ˚so[n of ?] ˚ ˚[

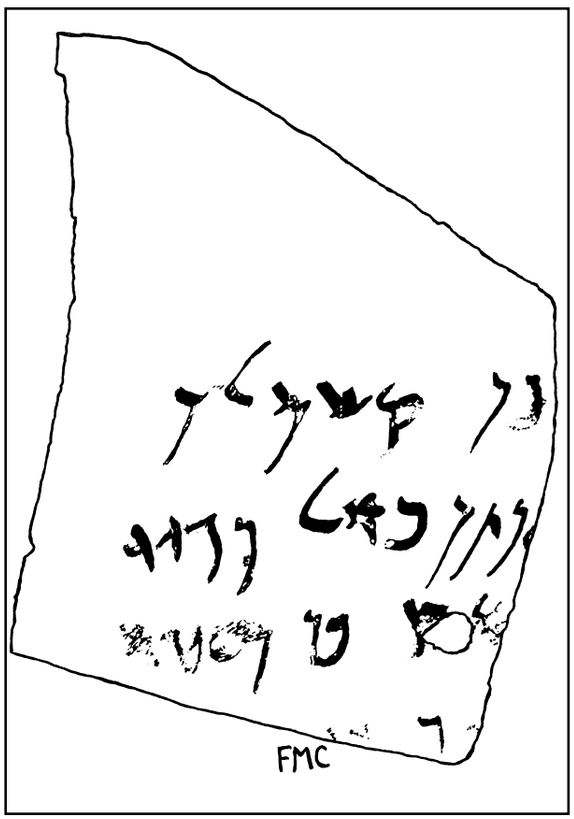
Line 1

This line is easily read. The name Qôś-malak, "Qôs is king," is a known Edomite name. It appears in Greek as Κοσμαλχος (Lidzbarski 1908: 340 lines 26, 30 and 33), in cuneiform transcription as *qa-uš-ma-la-ka* or *qa-ús-ma-la-ka*, the name of the king of Edom in the time of Tiglath-pileser III (Tallqvist 1914: 183b), in Lyhyanite as *qwsmlk* (Ryckmans 1934: 1.235), and in Nabataean as *qsmlk* (Glueck 1938: 12). The writing of the divine name here (*qš*) as opposed to the later *q(w)s* confirms the view that there was a shift from *š*/*ś* to *s* in the divine name about the end of the sixth century B.C. (Zadok 1977: 200, n. 13; 316).[46] If one calculates the margin, presuming the lineation of writing was at a right angle to the lines, there is little room for a name before *bn*, and one may place the *bn qšmlk* in the category of "nameless men" (Naveh 1990). Nothing appears after the name Qôś-malak.

Line 2

There is a chip on the edge of the ostracon, and around the chip some ink. Perhaps a *lamed* should

Figure 4.6 Hesban Ostracon A6.



be read. The trace would fit. It is tempting to take the *ʾalep* of *bʾl* as an error for *ʿayin* and read *natan-baʿl*, but this would be to ignore the putative *lamed* before *ntn*. *Ntnbʿl* appears as a Lyhyanite name; cf. Moabite *bʿlntn* (Jackson 1983b: no. 72; Ryckmans 1934: 1.238), but on methodological grounds one must reject such confusion as anachronistic. It seems better to take *ntnbʾl* as a variant (and anomalous) spelling of *natan-bēl*, a name with the same elements in reverse order. *Blntn* appears in an Ammonite name list (Jackson 1983b: 31; Aufrecht 1989: 47).[47] However, there are two objections to both readings: the calculation of the edge of the sherd on the right, and the trace of *lamed* at the beginning of line 2. If one takes the original margin of the ostracon as being at right angles to the lines of writing (as is most plausible), there is little room for another name in line 1, but increasing space for each of the following lines as one moves down. We probably must read the first name [ʾ]*lntn*,

a documented Ammonite name (Jackson 1983a: 19). The most popular theophorous element in Ammonite is ʾEl, and indeed Milkom is probably an ʾEl epithet. A third possibility is to take [ʾ]*lntn* and *bʾl* to be separate names with *bn* omitted as is common (see above, Hesban A3: lines 5, 6, 11, 12). There is separation between them, and the second *nun* of *ntn* is elongated beyond the length of the first nun anticipating the full emergence of medial and final forms in the fifth century B.C. The sequence *bʾl* may be a combination of the preposition *bi-* plus the divine name *ʾil*. This type of name formation appears in Old South and Old North Arabic: *bʿθtr* (Ryckmans 1934: 1.220) [*Bi-Aθtar*], *bsmʾl* (Ryckmans 1934.1: 220, 239, 257) [*Bi-sum-ʾil*], *bʿm* (Ryckmans 1934: 220) [*Biʿamm*], cf. *Bi-^{d}IM*, *Bi-da-di*, and *Bi-ṣi-id-qi-i* (Tallqvist 1914: 63b, 64b). These West Semitic names, however, may be *bin* names with assimilated *nun* (cf. Byblian Phoenician), or possibly *ʾab* names. Bi-ʾil itself does not appear. For the meaning of the names with the preposition, compare the biblical idiom *byhwh*, "through Yahweh," meaning "by his aid." Another possible interpretation, especially for a name like *bsmʾl* is "the deity (or name of deity) by whom one swears an oath." Compare also names formed with the preposition *l* + *DN*, e.g., *lšmš* and *Irmn* in Palmyrene names (Stark: 1971: 93a and 93b).

Ngyd (*nagīd*), is to be taken as a military title, "commander." In addition to the frequent biblical use of the designation, it is found in Aramaic (the Saqqarah Papyrus) (*KAI*: no. 266, cf. *KAI:* 224.10 for a possible additional occurrence in Aramaic) and Phoenician (the Nora Stone) (*KAI*: no. 46). Evidently a place name (perhaps Ḥešbôn) or tribal name is lost on the left of the broken ostracon. A few ink smears remain, but nothing legible.[48]

Line 3

The first name on this line is difficult to read. A broken *mem* is perhaps the best reading of the first letter on the edge of the ostracon, followed by *ṣade*. The sequence *-mṣ* can plausibly be filled out to *ʾmṣ*, and the full name to *ʾl-ʾmṣ* which would fill the space. In any case the name *ʾlʾmṣ* is at home in Ammon, appearing on three Ammonite seals (Aufrecht 1989: no. 5 and 18; Herr *et al*. 1991: 158; 175, pl. 1).

The patronymic is faintly preserved. I am inclined to read *plṭʾ*. *Pe* is better than *nun* for the initial letter. The base of the *lamed* is high, as expected. An alternative would be to read the base of a *ṭet*. The next to last letter is *ṭet* in all probability, though the combination *yod-reš* is not excluded. The final letter is certainly *ʾalep*. The root *plṭ* plus a hypocoristic ending (*-y* rather than *-ʾ*) appears in Ammonite. Indeed the root appears seven times in Ammonite personal names (Aufrecht 1989: nos. 17, 75, 86, 87, 109, 144; cf. Jackson 1983a: nos. 4. 89, 90, 91). An unlikely alternate but not an impossible reading is *nṭyrʾ*, *Naṭīraʾ*. The root is common in Aramaic (including Nabataean) personal names. The name *nṭyrʾ* also occurs in four unpublished Samaria Papyri.

Line 4

Only the letter *dalet* is clear among the remnants of ink on this line.

The Aramaic script of Hesban A6 is virtually identical with that of Hesban A5 in typology. The descriptions given for *ʾalep, bet, dalet* and *lamed* in Hesban A5 also apply to Hesban A6, and need not be repeated. The *kap* with its bowed, simple head came into use in the mid-sixth century and continued into the fifth century B.C. (cp. the forms in the Hermopolis Papyri from the late sixth or early fifth-century B.C.). *Pe* preserves a rather straight, uncurved tail. This is an early trait, and one that survives sporadically into the late sixth century B.C. (cp. the Bauer-Meissner *kap*, and some of the forms in the Hermopolis Papyri). *Ṣade*, if we have reconstructed it correctly, preserves a sixth-century B.C. form, that is reminiscent of the *ṣade* of the Assur Ostracon (seventh century B.C.). *Qop* with its "S"-shaped head, and relatively long leg is characteristic of the sixth and first half of the fifth century B.C. In the second half of the fifth century B.C., the leg shortens. The *šin*, with the middle stroke striking the two side strokes and making a "V" close to point and actually hitting the right side stroke, is a sixth century B.C. form (cp. the *šin* of the Bauer-Meissner Papyrus). By the time of the Hermopolis Papyri, the middle stroke has moved to the left, striking the left side stroke. In sum, we should date this ostracon to the end of the sixth century B.C.

Graffito A7

This inscribed sherd (fig. 4.7), Registration No. 73.1656, was found in 1973, in Area B, Square 2.

Figure 4.7 Hesban Graffito A7.

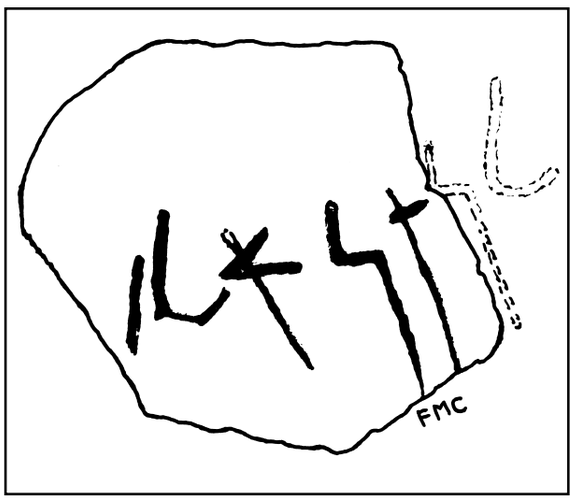
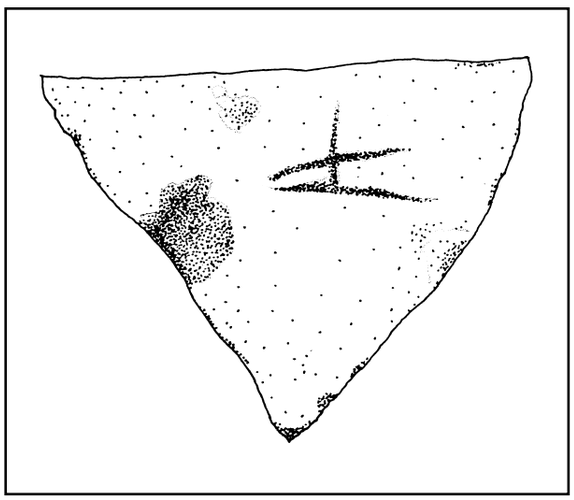


Figure 4.8 Hesban Graffito A8.



The archaeological context, as described by the excavator, was Iron II/Persian. The right side of the sherd is certainly missing. The inscription was scratched after firing.

The inscription can be reconstructed as follows:

[*n*]*tnʾl* |

[Na]tan-ʾēl 1

An alternate reading, [Ma]ttan-ʾēl, is, of course, possible. Natan-ʾēl is a popular biblical name, and *ntnyhw* appears both in the Bible and on Hebrew seals. The Phoenician equivalent *ytnʾl* is well known, as well as Phoenician *mtnʾl* (Jackson 1983a: no. 72; cp. no. 19). Following the name is a single vertical down stroke. Earlier I took it to be a word divider (Cross 1975: 18-19; Aufrecht 1989: no. 81). However, Puech (1985b: 11) prefers to read the number "1," which is probably correct.

The letters of the graffito are skillfully made. They display the graceful, elongated forms of eighth-seventh-century B.C. Ammonite. *Taw* is distinctive in that the cross-bar is tending to move to the right. The graffito is probably to be assigned a seventh-century B.C. date.

Graffito A8

The sherd A8 (73.1676; cf. fig. 4.8), was found in Area C, Square 2. Its context was predominately Iron II/Persian with a few possible Iron Age I sherds. The sherd preserves a crude *ʾalep*.

Excursus on the Ammonite Identification of Hesban Scripts of the Sixth Century B.C.

Ulrich Hübner (1988: 68-73; 1992: 32, n. 67) has argued that the Hesban Ostraca are Moabite, not Ammonite. His argument is essentially based on analysis of biblical references to Heshbon placed in Moab. The archaeological data, palaeographical data, and linguistic data are not seriously analyzed although he provides some *obiter dicta*. In fact the biblical data place Heshbon in both Moab and Ammon, and for that matter in Israel (Reuben). The data are most easily explained as changes in the political circumstances of Heshbon (if Heshbon is correctly identified with Hesban) over the centuries (Geraty 1983: 239-48). The question is who had hegemony over Hesban in the sixth century B.C. The archaeological evidence argues for the expansion of Ammon in Iron Age IIb and IIc into the north, west, and south. Homogeneous Ammonite cultural remains including Ammonite pottery (as opposed to Moabite pottery) have been found according to James Sauer, the *facile princeps* of Transjordanian ceramics, in Amman, el-Meqabelein, Sahab, Khirbet el-Hajjar, Tell Siran, Tell Hesban, Beqʿah Valley, Tell Deir ʿAlla, Tell el-Mazar, and Tell es-Saʿidiyeh (Sauer 1985: 206-14; 1994: 244-48). Evidently Hesban in the sixth century B.C. was Ammonite.[49]

The most incontrovertible evidence from the point of view of the present author is the paleography of the scripts of Ammon and Moab. The Ammonite cursive can be traced typologically from the Deir ʿAlla script of about 700 B.C. to the Tell Siran Bottle (a semiformal script; see above) to the Hesban Ostracon A1. Hesban A2 continues the series and is identical typologically with the Tell el-Mazar Ostracon No. 3 and is followed by Hesban A3. The sites of these finds move from the north (Deir ʿAlla and Tell el-Mazar) to Hesban in the south. Further, these scripts, as well as the lapidary scripts of the Ammonite seals, derive from eighth- or ninth-century B.C. Aramaic. The Moabite scripts, from the Moabite Stone of the ninth century B.C. to the late Moabite seals, stem not from an Aramaic archetype, but from a Hebrew archetype. The legal papyrus published by Bordreuil and Pardee (1990) is written in a cursive which obviously has a Hebrew cursive archetype, but exhibits traits of its own including those found in Moabite seals. Bordreuil and Pardee identify it as Moabite. I have also argued that it is best identified as Moabite (Cross 1996), but sharply disagree with their speculation that the papyrus comes from Iktanwah (*sic*!). This is not to mention the linguistic contrasts between Ammonite and Moabite. For example, Moabite has masculine plurals in *-īn* versus *-īm* in Ammonite, and the relative particle is *ʾšr* in Moabite as opposed to *ʾš* or *š* in Ammonite.

Put sharply, it must be said that if the script of Hesban is Moabite, then the script of Tell el-Mazar Ostracon No. 3 must also be Moabite and our historical geography of Transjordan rewritten. Alternately, we should have to argue that the putative Moabites of Hesban wrote in the Ammonite script and language, as well as fabricated Ammonite pottery.[50]

Notes

[1]The *editio princeps* is Hoftijzer and van der Kooij (1976). Van der Kooij's elaborate paleographical discussion is useful but ultimately ends in confusion as he assigns the script to the Aramaic family. While the Ammonite national scripts, lapidary and cursive, branch off from the Aramaic script of the Syrian chancelleries by the end of the seventh century B.C., the characteristics of the Ammonite character, its archaistic survivals on the one hand and innovations on the other are so numerous over against the contemporary Aramaic scripts as to require a new designation. If this were in doubt, the discovery of the Tell Siran Bottle settled the issue (Cross 1973a: 12-15; 1985: 367; Puech 1985a: 354-65).

[2]Mazar Ostracon No. 3 (JUM 223/79) dates to *ca*. 575 B.C., between Hesban A1 and A3. I have not listed here the legal papyrus published by Pierre Bordreuil and Dennis Pardee (1990: 49-69*;* pls. 7-10). Its script has traits of "Trans-Jordanian" style, but the script and language are not Ammonite. Most probably it is Moabite to judge from its script and morphology. See the discussion of its script in Cross 1996. This is the first cursive which qualifies as Moabite, and should end all speculation that some or all of the Hesban ostraca are Moabite (see the excursus below).

[3]For bibliography, see the exhaustive study by Aufrecht (1989). See especially nos. 77 (Amman Ostracon), 73 (Double-faced Statue), 58 (Amman Theater Inscription), and 144 (Tell el-Mazar Ostracon No. 3).

[4]The *edition princeps* is found in Barnett (1951: 34-37; pl. 110; see also the republication of the statue and its inscription in Zayadine (1974: 129-36; pls. 3-4). Since then, Émile Puech has discussed the Statue Inscription again with references to more recent studies (1985b: 5-14; figs. 1-8). The Statue inscription is not without problems. While its script appears to be a formal Ammonite, it is rather clumsy. The figure in the statue exhibits side curls, which as Barnett observes, should not be the case for an Ammonite (see Jer 9:25 and 25:23). Further his name is given with the element *bar* (or *bir*) contrary to the universal practice in Ammonite which uses the Canaanite *bin*. One suspects that the statue is that of a grandee, a visitor or ambassador in Amman, not of an Ammonite, much less an Ammonite king. I should read the inscription, partly with Puech, partly with Barnett, as follows: [*s*] *ʾmlʾ yrḥʿzr/* [*br z*] *kr br špn*. The crucial reading is the final proper name. Zayadine and Puech wish to find here the name of the Ammonite king rendered in Akkadian as *sanip*[*u*]. Zayadine reads *šnb*—the *bet* is impossible in Ammonite—Puech *šnp* which is not impossible. However, the letter following *šin* is a *pe* in a characteristic Ammonite vertical stance (see below) with a small head, and the following letter can only be *nun*, i.e., *Šapan*.

[5]See also the bibliography in Aufrecht 1989: No. 78.

[6]See Cross 1969a: 13-19, now in need of revision, and the bibliography in Aufrecht 1989, no. 59. The paleography of the ninth-century B.C. Aramaic scripts are also discussed in Cross 1995. It is to be noted that there is an archaic feature or two in the Amman Citadel Inscription which do not survive in the Syrian Aramaic texts of the ninth century B.C., notably the "Y"-shaped *waw* known earlier in eleventh- and tenth-century B.C. Hebrew and Phoenician inscriptions.

[7]The new enumeration is laid out in Cross 1986: 480-81.

[8]The reading follows Hillers (1964: 49) for the most part and goes against the writer's earlier proposals (1968: 41-46). Incidentally, the forms *kprt* and Akk. *Karpatu* (especially of standard measure) are probably cognates.

[9]Aufrecht (1989) lists eight occurrences, nine including this one.

[10]There is certainly a number here as there is a number 2 after *nkʾt* in the next line. Puech's (1985b: 13-14) unexplained reading *w/zrdḥ b*[*t*] is impossible in my opinion. The ostracon itself as well as photographs must be relied on.

[11]For this plural, see *bšnt rḥqt*, "in years far off," in the Tell Siran Bottle Inscription II. 7-8.

[12]1 Samuel 1:24 (according to the text of 4QSam[a] and the Old Greek).

[13]In an Akkadian text cited in *CAD* 1.2: 263, a buyer is prepared to pay silver for "cows either three-year-old or two-year-old ones" (ÁB.ḪI.A [arḫātim] *šumma* MU 3 *šumma šaddidātim*).

[14]In an earlier publication (1973a, cf. the box in Herr 1985: 171), I followed an older view that the *Baʿšaʾ* (written ba-ʾa-sa mār ru-ḫu-bi ^{KUR}a-ma-na-a-a in the archives of Shalmanezer III) was a king of Ammon. Rather, he is best identified as a king of an Aramaean city state in the Anti-Lebanon, Amanah. This reading was called to my attention by Paul Dion (personal communication; letter of November 29, 1985). Actually in another context (1973b, 27-28), I had discussed at length the identity of Mount ʾAmmana (or ʾAmana), locating it too far north, but confusing it neither with the Ammanus (Ḫamān), nor ʿAmmōn. For an excellent discussion and more recent bibliography, see Cogan (1984: 255-59, especially nn. 8 and 27). The etymology of the name is not clear however, cf. O'Connor (1987: nos. 55-64, especially no. 55).

[15]Puech (1985b: 14) wishes to read *wš* for *ʾš*. *Waw* and *ʾalep* do often resemble each other. However the reading here is *ʾalep* in my opinion. The appearance of the form with and without the (silent) prosthetic *ʾalep* in Phoenician is well known, and not surprising in Ammonite.

[16]Compare the Moabite name *kmšntn* on a seal published by Avigad (1970: 284-95, esp. 288 and pl. 30.4).

[17]On the classification of Ammonite, see Israel (1979: 143-59 cf. Sivan, 1982: 219-34; Jackson, 1983a: 107-9; Garr, 1984: 228-35; Puech, 1985b: 23-24 and Aufrecht 1987: 85-95). The views of Giovanni Garbini (1967, 1970, 1972) on the affiliation of Ammonite have been rejected by most if not all scholars, and apparently now by Garbini himself; see Israel (1979, n. 3; cf. Garbini 1974).

[18]The top of the *lamed* is abraded as is evident in my drawing. I prefer this reading to *ʾalep* which is possible, or to *waw* with an abraded leg.

[19]See O'Connor (1987) no. 59; Arabic *twb*, "to repent" is probably an Aramaic loan (compare Arabic, *θwb*. "to return").

[20]E.g., *KTU* 4.128, 4.149, 4.171, 4.175, 4.216, 4.219, 4.230, 4.246, 4.264; *Ugaritica* V: 99-100 (in Akkadian), A.F. Rainey has collected and discussed some of these and other texts attempting to demonstrate that *l* + PN can be used by the recipients of goods as well as the owners. I have no doubt that he is correct. Indeed *l*- can mean "belonging to," product of," "distributed to," "credited to," "let to," "presented to," "given to," in extant epigraphic material. However, I cannot follow Rainey (1962: 62-63; 1967: 32-41 and 1971: 23-29) in his interpretation of the Samaria Ostraca (shared with the late Yohanan Aharoni).

[21]This seems fairly certain now, thanks to Aharoni's definitive solution of the Samaria numerals (1966: 13-19; cf. Kaufman 1967: 39-41). This dating of the Samaria Ostraca also suggests that the date of the Murabbaʿât Papyrus be moved up to *ca*. 700 B.C. (my former date was 700-650 B.C.) and associated with the Assyrian crisis during Hezekiah's reign (cf. Cross 1962: 34-36).

[22]That is gibbōrê ḥayil. The breakdown of the egalitarian (i.e., kinship) land system of Israel came with the rise of the royal officialdom including commercial and military officers attached to the crown, who were rewarded with grants of land, fiefs (see Yadin 1959: 184-87 and 1961: 22-25).

[23]On the use of *lmlk* on wine jars and of *l* + PN on wine jars see Cross (1968: 226-33). Neither are proper parallels to the usage of the Hesban list.

[24]The Ammonite king list should now be revised from that in Herr 1985: 171 as follows:

Naḥaš	Tenth century B.C.—contemporary of Saul and David (1 Sam 11)
Ḥanun	Tenth century B.C.—contemporary of David (2 Sam 17)
[gap in list; on Baʿašaʾ, see above, n. 14]	
Šanip	*ca.* 735 B.C.—contemporary of Tiglath-pileser III (744-727 B.C.)
Padoʾel	end of 8th/early 7th century B.C.—contemporary of Sennacherib (704-681B.C.) and Esarhaddon (680-669 B.C.); named on seal of royal servant
ʿAmminadab I	mid-7th century B.C.—contemporary of Ashurbanipal (668-627 B.C.); named on two seals of royal servants (Aufrecht 1989: nos. 17, 40)
Hiṣṣalʾel	*ca*. 625 B.C.—named on Tell Siran Bronze Bottle (Aufrecht 1989: no. 78)
ʿAmminadab II	*ca*. 600 B.C.—named on Tell Siran Bronze Bottle
Bʿlyšʿ	*ca*. 580 B.C.—Tell el-ʿUmeiri seal of royal servant; cf. Jer 40:14; *bʿlyšʿ*, corrupt for hypocoristic *bʿly*. (Aufrecht 1989: no. 129).

[25]The *samek* may be a dittography of the following *mem* in a manuscript of roughly the second century B.C. when *samek* and *mem* were frequently confused. Compare the *mem* and *samek* of the 4Q Qohelet[a] manuscript. *Baʿlay* or simply *Baʿl* are well-known hypocoristica. There is no reason to relate the transcription of Old Aramaic *θ* with *samek* in the Tell Fahriyeh Inscription to the transcription of biblical *bʿlys*. We know that in the early period when *samek* was still an affricative it was suitable to represent *θ*, but that later, before the time of this inscription, *samek* had shifted to a simple sibilant. This shift of *samek* is clearly reflected in the systematic change in Egyptian and Akkadian transcriptions of proper names containing *samek*. Contrast Rendsburg (1988: 73-79).

[26] I am in full agreement with J. Naveh 1970: 14; 1980: 163; cf. Puech, 1985b: 12-13 and Aufrecht 1989: no. 47. It is noteworthy that the archaic elements in the Ammonite semi-formal and cursive of 600 B.C. are sufficiently like the Aramaic cursive of Nimrud in the late eighth century B.C. that Puech can propose to lower the date of the Nimrud Ostracon to *ca*. 650-625 B.C. But the two hands of the Nimrud Ostracon exhibit traits not yet developed in Hesban A1 and the Siran Bottle. *Dalet* and reš have not opened in Hesban A1 (contrary to Puech's drawings), and on the Siran Bottle ordinarily they are not open, though an occasional form shows a slight tendency to open. This follows the style of Deir ʿAlla. On the contrary, in the Aramaic cursive scripts of the seventh century B.C.

(when Puech would redate the Nimrud Ostracon), *dalet* and *reš* as well as *ʿayin* are always fully open. *ʿAyin* is beginning to open toward 600 B.C. in the Ammonite cursive and semicursive but closed forms still appear. The open form is not yet standard. Other traits linking the Nimrud scripts with eighth century B.C. Aramaic scripts may be observed. For example, note the elongated forms in the Nimrud Ostracon *versus* the squat forms of Ammonite at the end of the seventh and the beginning of the sixth century B.C. *Ṣade* especially shows the contrast. See also Dupont-Sommer 1948: 68 and *KAI* 266).

[27]See note 26, and compare the script chart in Cross (1975: 15, fig. 2).

[28]See Bordreuil 1986: no. 78, where the best photograph is to be found and Aufrecht 1989: no. 23. I would date the seal to the end of the seventh century B.C. with Bordreuil.

[29]It is noteworthy that the *kap* of the Nimrud scripts belongs to the Aramaic cursive found, for example, in certain of the Nimrud Lion Weights (*CIS* 2: nos. 1-7), and not to the Ammonite formal or cursive scripts.

[30]For the complex, Aramaic cursive *samek*, see Naveh 1970: 20.

[31]The *qop* in this case would be of the same type as Hesban A3. Puech (1985b: 14) suggests *b̈ḥ˚m˚sʾm̈* (?). The letters *ḥet, samek* and *ʾalep* as Puech (1985b: 18, fig. 6) draws them are not in the Ammonite cursive of this period. Furthermore I see very different traces on the ostracon here than does Puech. Compare our two drawings.

[32]Aufrecht 1989: nos. 15 and 135 and the bibliography. The script of the former is very close to Hesban A3, and must be labeled Ammonite; see Cross 1986: 477, n. 3.

[33]Aufrecht 1989: no. 70; Zuckerman 1987: 28-30; pl. 12; and Aufrecht 1992: 1*-3*, no. 2, fig. 2. The last two items were called to my attention by Aufrecht. I prefer to read the last-mentioned seal: lnny bn ʾlʿzr, "Belonging to Nanay, son of ʾIlʿazar."

[34]In cuneiform there is the possibility that *ḥm* be confused with *ʿm*(*m*).

[35]For the root in West Semitic names in cuneiform, see Zadok 1977: 81 and references; Tallqvist 1914: 298b.

[36]Cross 1986: 479, and n. 24. See also my discussion of *šqlt* in Neo-Punic in Cross 1994.

[37]O'Connor 1987: no. 102. He also notes names with elements having similar meaning: *spr*, *ḥšb*, and *mny*.

[38]The Wadi ed-Daliyeh Papyri present the names *yhwʿqb*, *ʿqbyh*, and *ʿqbʾ* (unpublished).

[39]See Zadok 1977: 108, 168 (*-ān* + *î*); cf. Tallqvist 1914: 64 (*bi-nu-ni-i*).

[40]In the past I have used the term "Palaeo-Hebrew" (in distinction from Old Hebrew) to designate the Hebrew script of the fourth century B.C. to the second century A.D., in contrast with the contemporary Jewish character, descended from the Persian (Aramaic) chancellery hand. Unfortunately this usage has been misunderstood and the term "Palaeo-Hebrew" used indiscriminately for the pre-Exilic "Old Hebrew" and the later "Palaeo-Hebrew" scripts.

[41]The papyrus dates from the mid-sixth century B.C. (cf. Naveh 1970: 16 and 34; figs. 3, 1.4).

[42]Unfortunately, Puech (1985b: 17, fig. 7b) has failed to take account of these gouges in making his drawing. This has resulted also in some misreadings of the ostracon, notably the reading *bet* for *pe* in line 3. Neither the tick above, nor the long base below exist.

[43]Edzard n.d. vol. 1, Mesopotammien: 108. Note also *Navaía* of 2 Maccabees 1:13, 15. Tallqvist (1905: 159) lists some forty names formed with Nanay.

[44]I am indebted to Professor Naveh for an excellent set of unpublished photographs of the texts. The *editio princeps* of the inscriptions was published by Giron in 1923.

[45]Naveh (1970) has distinguished systematically a "conservative" and a "vulgar" cursive style in fifth-century B.C. scripts. His analysis is no doubt correct. Our "chancellery cursive" corresponds to his "conservative cursive."

[46]A list of Qôs names known up until 1972 may be found in Geraty 1972: 95-101.

[47]The reading *blntn* is not in doubt despite the suggestion of Bordreuil and Lemaire 1982: 24, n. 2 that it stands for **bn ʾlntn*, the *nun* and *ʾalep* having been assimilated. I know of no parallel. *Nun* in Byblian Phoenician is assimilated in certain contexts, but precisely not before laryngeals. The theophorous element *bl* is simply *bēl*, the Akkadian epithet of Marduk. It appears in an Aramaic name at Elephantine (Stark 1971: 43), and probably in Phoenician (*KAI*: 59). At Palmyra, Mesopotamian *bēl* is ubiquitous in personal names, alongside West Semitic *bōl* and *baʿl* (cf. Zadok 1977: 69-71, and Coogan 1976: 48).

[48]I think it most unlikely that we are dealing with another personal name. However, see *ναγδαζ* (*ngdʾ* ?) in Wuthnow, 1930: 80; cf. Lidzbarski 1921: 329, no. 44. Certainly the Greek transcription cannot reflect the ostracon's *ngyd*.

[49]On the character of the remains at Iron IIC-Persian Hesban, see Sauer 1985, 1994. Contrast the views of Stefan Timm (1989: 169-77), whose paper is marred by many errors. One example should suffice. Timm (1989, n. 31) writes: "Die Deutung als Nanay-iddin von der Wurzel NTN bei F. M. Cross (= Anm 23) ist nicht überzeugend." I actually wrote, "[The name] is a transparent formation composed of two familiar elements, the name of the goddess Nanāy . . . and the familiar element *iddin*, "has given." I said nothing about a root NTN, but rather the element *iddin* (the preterite of Akk. *Nadānu*). The analysis of the Akkadian name is not in doubt. Incidentally, Timm's reference to the note should read Anm 24, not 23. I am indebted to Walter Aufrecht for calling Timm's paper to my attention.

[50]I wish to thank Walter Aufrecht for his careful reading of this paper, and for his many substantial, as well as typographical corrections, that he has proposed, as well as a number of bibliographical suggestions which he has supplied.

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Chapter Five

TERRACOTTA FIGURINES FROM TELL HESBAN AND VICINITY

Boguslav Dabrowski

Chapter Five

Terracotta Figurines From Tell Hesban and Vicinity

Introduction

The excavation and survey at Tell Hesban and vicinity conducted between 1968-1976 yielded 18 terracotta fragments of objects commonly called figurines. These figurine fragments represent humans and animals as well as parts of zoomorphic vessels, possibly a vessel with anthropomorphic motifs and a ceramic stand.

Thirteen fragments date to the Iron Age and Persian periods, and five to the Roman, Byzantine and Islamic periods. Sixteen of these fragments were found at Tell Hesban during the excavations. Within this group, object 76.unregistered was a surface find and object 2781 came from a probe (G.14) at the foot of the tell. ʿAyun Musa (Site 108) and Tell er-Rameh (Site 95), from the Hesban survey, produced one fragment each (2102 and 73.unregistered) respectively (see Table 5.1).

One may mention in passing that a figurine head was found on the surface of Tell Hesban during a visit in 1963 (Anderson 1963-1964: 1-2; cf. Vyhmeister 1968: 175) and a female plaque figurine was picked up at ʿAyun Musa by Glueck (1934: 24, 27, fig. 8).

The figurines from Hesban were treated in part in ʾAmr's unpublished dissertation (1980). Out of the 13 Iron Age/Persian period-figurines, ʾAmr discussed only 6 objects (76.unreg., 73.unreg., 817, 1576, 651 and 1631).

Thirteen fragments out of the total of 18 were examined in the Horn Archaeological Museum at Andrews University and the Archaeological Museum in Amman by the present author. The main source of information was the Hesban Objects Book housed at the Institute of Archaeology at Andrews University as well as preliminary dig reports published in *Andrews University Seminary Studies*. Since the author did not succeed in locating all the figurines from the Hesban Expedition housed in Jordan, ʾAmr's dissertation was also used as a source.

Typological Schemes for Human and Animal Representations in Terracotta

Palestinian clay figurines have been the subject of several important and detailed studies since the early 20th century. Most of them have dealt with the most intriguing category, i.e. female figurines. This was because clay figurines of males were very scarce compared to those of females, throughout all of Palestine in the Bronze and Iron Ages. The seemingly unattractive animal figurines did not receive much attention from the early scholars. The first to deal thoroughly with the subject of Palestinian female figurines was a German pastor, Edwin Pilz (1924). He prepared a catalog of 123 figurines and worked out a typology based primarily on their iconography, discerning seven tentative groups, A-F and a "Mischtypus."

The same subject was undertaken later on by W. F. Albright in several studies, most fully in a monograph on 42 figurines from his excavations at Tell Beit Mirsim (1939). His interest was primarily in the provenance of types, chronology, and parallels with figurines of neighboring cultures.

He was followed by James Pritchard, who, in his 1943 work on figurines, discussed almost 300 female representations in terracotta, bone, metal and on scarabs. He divided them into eight types relying on iconography and was not interested in differentiating between figurines proper and vessels sharing the same iconography.

A more recent study dealing exclusively with female plaques is that of Tadmor (1982). Her main contribution was the differentiation between standing and lying female representations.

The most comprehensive and detailed analysis was proposed by Holland in his dissertation (1975) on plastic art in the Iron Age (see also his 1977 study). Its unquestionable value is grounded not only in its treatment of the imprecisely defined objects known as figurines, but also that of human and animal representations in plastic art from both

Table 5.1 Figurines from Tell Hesban and Vicinity.

Object No.	Site	Locus	Date	Dimensions	Allocation
76.2826	Tell Hesban	C.5:194:491	Iron Age I	58 mm	Amman Museum
74.2102	ʿAyun Musa	-	Iron Age II	45 mm	HAM74.0409
76.unreg.	Tell Hesban	-	7th-6th Cent. B.C.	63 mm	HAM76.0026
73.unreg.	Tell er-Rama	-	Iron Age	72 mm	HAM73.0045
76.2581	Tell Hesban	B.2:137:337	Iron Age II/Persian	75 mm	HAM76.0357
71.0817	Tell Hesban	B.4:15:47	Iron Age II	56 mm	HAM71.0273
73.1576	Tell Hesban	B.1:143:395	Iron Age II/Persian	62 mm	Amman Museum
71.0651	Tell Hesban	B.1:78:227	Iron Age II/Persian	58 mm	HAM71.0194
73.1681	Tell Hesban	C.2:44:503	Iron Age II/Persian	45 mm	HAM73.0352
73.1595	Tell Hesban	C.2:40:475	Iron Age II/Persian	56 mm	HAM73.0290
74.1793	Tell Hesban	B.4:205:403	Iron Age II/Persian	53 mm	HAM74.0134
73.1631	Tell Hesban	B.1:143:376	Iron Age II/Persian	53 mm	Amman Museum
68.0181	Tell Hesban	A.1:15:46	Iron Age	38 mm	DAJ
71.0885	Tell Hesban	C.4:13:294	Early Roman IV	45 mm	HAM71.0319
76.2735	Tell Hesban	C.5:174:432	E.Roman-L.Byzantine	58 mm	HAM76.0494
76.2781	Hesban Probe	G.14:16:36	Umayyad	75 mm	DAJ
68.0266	Tell Hesban	C.1:6:158	Mamluk	52 mm	HAM68.0222
76.2414	Tell Hesban	A.10:4:8	Mamluk	36 mm	Amman Museum

sides of the River Jordan. Holland collected 2711 human and animal figurines, vessels with human and animal motifs, model shrines, and coffin lids, dividing them into sixteen types (A-P). Each of these types has from one to sixteen subtypes, with the subtypes further divided into other categories. His classification takes into consideration both manufacture and iconography.

ʾAmr's analogical dissertation (1980) treats clay figurines and zoomorphic vessels from Transjordan exclusively. He divides 266 objects into simple categories: human, animal, and miscellaneous (undefined). The subdivisions follow iconographical patterns. ʾAmr was more interested in the symbolism and function of the figurines than in their typology.

Another scholar who deals exclusively with Transjordanian figurines is Dornemann. A section of Chapter 10 of his book (1983: 129-49) treats terracottas such as figurines, model shrines and anthropoid sarcophagi. Dornemann did not intend to work out a specific grouping for his objects; instead, he was interested in their style, chronology and iconography. One may also add Stern's monograph (1982: 158-82, 270-73) in which he discusses stone, terracotta and bronze statuettes and figurines from the Persian Period.

None of these classifications seems satisfactory any longer. Although Holland's typology was the most helpful for our purposes, its imperfections seem to be in multiplying subcategories based on the state of preservation of figurines (e.g. heads, torsos and other parts of the same object may belong to different subtypes), in the distribution of fragments, which are parts of the same types of objects, to different categories (e.g. kernos fragments) and in the debatable use of certain terms. This overclassification tends toward confusion rather than enlightenment. Lacking anything better, we have nevertheless followed Holland's scheme, realizing the need for an improved classification of anthropomorphic and zoomorphic motifs in terracotta plastic art.

Iconography and Description

What follows is the description of the 18 fragments divided into eight basic categories based on Holland's classification: "Female Plaques," "Human Pillar Figurines," "Riders," "Solid Hand-Modelled Bovinae," "Solid Hand-Modelled Miscellaneous Animals," "Hollow Horses Not Spouted," "Hollow Hand-Modelled Miscellaneous

Animals Not Spouted," and "Zoomorphic Spouted Vessels." as well as the "Post-Persian Figurines."

Object 2826: Torso Fragment of a Female

This figurine (76.2826) was found in locus C.5:194:491. It is 58 mm and dates from the end of 11th to the beginning of 10th century B.C. It was allocated to the Dept. of Antiquities and is located in the Amman Museum (without a number; ʾAmr 1980: no. 88).

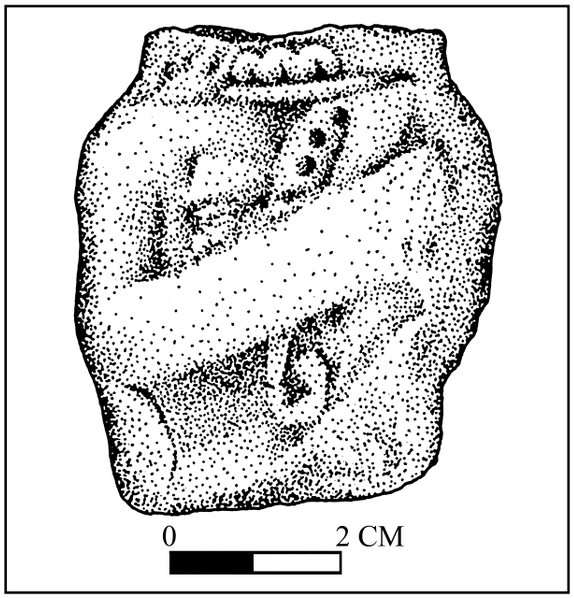
Description

The head and legs missing (fig. 5.1). It consists of the right side of the torso with the left arm apparently missing. Its ware is creamy red with small pieces of white grit (ʾAmr 1980: no. 88). The female figure is molded onto a solid tablet which was manually narrowed on both sides of head, waist, and legs. The right breast is shown, indicating a bare torso, at least above the waist. A disc is positioned horizontally in relation to the body and pressed against the left breast. The right arm is bent at the elbow, while the hand seems to lie flat on the right side of the disc. The left hand, which is now missing, apparently held the disc from the bottom. A row of impressed dots circle the edge of the disc. Two parallel impressed lines on the right arm suggest a single armlet. Similar lines and a bracelet are found on the forearm close to the elbow. A raised line and row of dots around the neck indicate a necklace. Undoubtedly another raised line, which is now missing, existed above the dots, forming the upper edge of the necklace. A girdle ending with a loop turned to the left is hanging down from behind the right arm. It may continue up above the arm with a loop turned to the right just below the right breast. ʾAmr also deals with this fragment in his unpublished dissertation (1980: no. 88)

Parallels

Parallels from Transjordan include Tomb "A" from Irbed (Dajani 1966: 90-91, pl. XXXIII.16; XXXVIII. T.A.16; Dornemann 1983: 129-30); Deir ʿAlla (ʾAmr 1980: no. 87); Amman Citadel (ʾAmr 1980: no. 86 = Dornemann 1983: fig. 89.3); Amman (Holland 1975: pl. 10.6); Khirbet ʿAyun-Musa near Mount Nebo (Henke 1959: pl. 4.b); el-Meshhed also near Mount Nebo (Glueck 1970: fig. 92 = ʾAmr 1980: pl. 22.3); Kerak (Holland 1975: pl. 10.7 = ʾAmr 1980: pl. 22.2); near Kerak (Glueck 1970: fig. 93 [left] = ʾAmr 1980: pl. 22.1); model shrine bought in Kerak (Zayadine 1991: fig. 37 = ʾAmr 1980: no. 104); with incised features: Deir ʿAlla (Franken and Franken-Battershill 1963: pl. XIV: A = Holland 1975: fig. 19.8 = ʾAmr 1980: no. 33) ; Deir ʿAlla (ʾAmr 1980: no. 34); Deir ʿAlla (Holland 1975: fig. 19.7 = ʾAmr 1980: no. 35).

Figure 5.1 Torso Fragment of a Female.



Female Plaque Figurines Holding a Disc

This figurine fragment is the only representative from the finds at Hesban to fall within this particular group. Figurines representing women holding a disc-shaped object appear already in the third millennium B.C. in Mesopotamia. They seem to have been the predecessors of similar Palestinian figurines (Meyers 1987: 118, n. 12).

Palestinian female figurines holding discs belong to different types, but can be divided into two main categories on the basis of their manufacture. The first group consists of solid plaques, which belong approximately to Type C.VI.a in Holland's classification (1975.1:221), Pritchard's Type V (1943: 54), Dornemann's Group I, and a plaque class of his Group II (1983: 129-31). The plaques can be further divided into molded figures, which comprise the majority of the group, and at least partially hand-modelled figures, with incised

and applied decoration. There is, however, some confusion in attributing a molded or hand-modelled character to the plaque figurines, especially those from Deir ʿAlla (Franken 1960: 389; Holland 1975.1: 26, fig. 19.7, 8; ʾAmr 1980: nos. 33, 34, 35; Dornemann 1983: 130). The figures are entirely nude with waistbands or partially nude, i.e. above the waist, with decorated or plain skirts. Completely dressed figures do not seem to have appeared among the objects of this group.

The other group contains "pillar" figurines with hollow, conical bodies and heads molded separately and attached to the body. This compares well to Types B.V.a and B.V.e in Holland's classification (1975.1: 211, 213), and Dornemann's "pillar" class of Groups II and III as a whole (1983: 131-32).

An iconographical motif of a woman holding a disc is also attested on a terracotta model shrine bought near Kerak and dated to Iron Age I (Zayadine 1991: fig. 37 = ʾAmr 1980: no. 104). The female figurines, stylistically matching with molded plaques, flank the entrance of a shrine as miniatures of votive pillars (cf. Weinberg 1978: 44).

Object 2826 belongs to the first category of molded plaques, matching Dornemann's Group I. He describes the forming of features in a mold as "accentuated primarily by the use of line rather than by plastic shaping or modeling of planes" (1983: 129). This figurine is nude, but the state of preservation makes it hard to determine whether it is completely or partially nude.

Identification of the Disc-Shaped Object

The subject of the identification of discs held by female figures has been widely discussed. Reviews of different opinions have been presented by Hillers (1970: 609-10), ʾAmr (1980: 111-13) and Meyers (1987: 118-22). The list of functional and symbolical interpretations which have been proposed for the disc-shaped object present on Mesopotamian and Palestinian figurines includes a cake or round loaf of bread, a plate for offerings, a sacred object, a fertility symbol, a sun disc, and a musical instrument. Dornemann (1983: 129-36) and ʾAmr (1980.1: 118) assert that all the discs held by female figures, either on plaques or "pillar" figurines, are tambourines. Hillers (1970: 614), who has dealt only with plaque figurines, argues for tambourines or hand-drums as well, probably to be identified with the biblical drum (Heb. *top)*. Meyers (1987: 120), however, maintains that "a type of membranophone, or percussion instrument, known as a frame-drum" can with certainty be ascribed to "pillar" figurines. The identification of discs on plaque figurines is, according to her, problematic. It lies with the presence or lack of decoration on discs and in their position in relation to the body. Discs on plaques, often decorated, are pressed against the body. Discs on "pillar" figurines are plain and positioned perpendicularly to the body.

However, stressing the difference of disc positioning within these groups of figurines does not appear to be correct. Horizontal placement of discs on plaques in relation to the body does not appear to be evidence for a different function of discs on plaques, but rather seems to be the result of a two-dimensional projection of a three-dimensional reality, reflecting the way the discs were held. What is more, the use of molds in manufacturing plaques implies "flat" designing and does not allow for protruding details such as perpendicular discs. Neither does it seem that discs were only displayed perpendicularly on "pillar" figurines. An object from Tell er-Rumeith, in Transjordan, shows another alternative, i.e. in parallel position with the body. The same disc position is also displayed on a "lamp goddesses" figurine found near Buseirah (Glueck 1970: fig. 90 left).

Then there is the question of the proper identification of this instrument. Two widely accepted options, a portable drum or a tambourine, will be considered. Meyers (1987: 120; pl. 7a) argues for the former, in relation to discs held by "pillar" figurines because the discs are not decorated and there seems to be no hint of the existence of metal discs affixed into the rim of the drums that would characterize them as tambourines. She also asserts that the position of the hands suggests beating with the palm, and that the composite modelling of fingers points to a drum rather than to a tambourine which is played either by shaking or striking with the knuckle. Although the argument pertaining to the gesture and presentation of hands/palms does not seem convincing when compared with the position of the hands on plaque figurines and individually modelled fingers on "pillar" figurines from Tell el-Rumeith and Tell el-Mazar (Yassine 1988: pl. XIII.4 top right = ʾAmr 1980: no. 30), it does seem true, that in general, "pillar" figurines display a portable frame-drum (membranophone), rather than a tambourine or timbrel.

In terms of plaque figurines, the position of the hands in relation to the disc seems to imply that females depicted on plaques are playing the same kind of percussion instrument as they are on "pillar" figurines. In both cases the left hand supports the disc from the bottom and the right hand is used to strike it. Whether the frame is struck with the knuckle or the skin membrane with the palm cannot be judged. It appears that either way is possible.

While Meyers (1987: 119-20) suggests that the existence of the disc decoration, sometimes on its center part, can eliminate the drum/tambourine interpretation, which requires a plain membrane, the decoration, if present, concentrates in most cases on the edge of the discs. It consists of inner lines, triangular markings, incised dots, and combinations of these elements. One possibility is to explain the decoration in terms of drum/tambourine construction. De Vaux (1957: 579) identified the triangular markings as the cords holding the skin of the drum membrane. An interesting example comes from Deir ʿAlla where the figure holds a disc clearly depicted as three-dimensional. The side of the cylinder-like disc is decorated with parallel strokes, which can be correlated with cords holding the skin. Round and relatively large holes on the edge of the disc on Hesban Object no. 2826 can be interpreted as small metal discs inserted in the frame, a characteristic of tambourines; yet they do not extend beyond the edge of the disc.

This interpretation, however, does not explain the decoration on the central part of some of the discs. This is why Meyers (1987) is reluctant to identify decorated discs as drums. It does not seem appropriate to see these dots and lines merely as the inventions of artisans, with no relation to reality. The treatment of adornment, especially necklaces, demonstrates the craftsman's care for seemingly nonimportant details. One cannot exclude the possibility that the membrane was painted and that the decoration on the discs reflects this possibility.

Another interpretation, suggested by Schroer (1987: 273-81), is that the disc represents a cake. Some reasons for this suggestion are disc decoration (some motifs had symbolical meaning) and the manner in which the discs are held, which is typical for grasping other offerings.

Necklace

One other feature to consider is jewelry, i.e. armlets, bracelets, anklets (singular or in sets of two or three) and necklaces. Due to the fragmentary nature of this figurine the only element of jewelry is a necklace. Necklaces on Transjordanian figurines with discs seem to belong to two different categories: choker necklaces and collar-like necklaces with pendants. The choker necklace, worn by the Hesban Object 2826, consists of two bands framing a row of projected dots (or inlays?) similar to a figurine from Megiddo (May 1935: pl. XXVII.M 5418 = *ANEP* 469 bottom row second from the left). This type of necklace is very much like those on the double-faced heads from the Amman Citadel, which also consist of two lines framing three round holes with inlays (Abou Assaf 1980: pls. XII-XVI). Other parallels to this type are a small Syrian stone head (Barnett 1975: 44, fig. 7), and an ivory head from Nimrud (Mallowan 1966: fig. 533; cf. Abou Assaf 1980: 42).

Girdle

A final feature on Object 2826 is a kind of girdle with a loop seen on some figurines of this type. It is clearly visible on a figurine from Megiddo (May 1935: pl. XXVIII.M 5418), and one from Hazor (Yadin et al. 1960: pls. LXXVI.14, CLXII.3). On Hesban Oject 2826 there is a possible modification in that the girdle may continue above the arm. The function of this element is difficult to determine. Yadin et al. (1960: 33) assert that the girdle on the Megiddo figurine is falling from the disc. Thus, it could be a textile tassel attached to the edge of the disc. Another possibility is that the loop of this "girdle" is rather a solid staff, functioning possibly as a scepter.

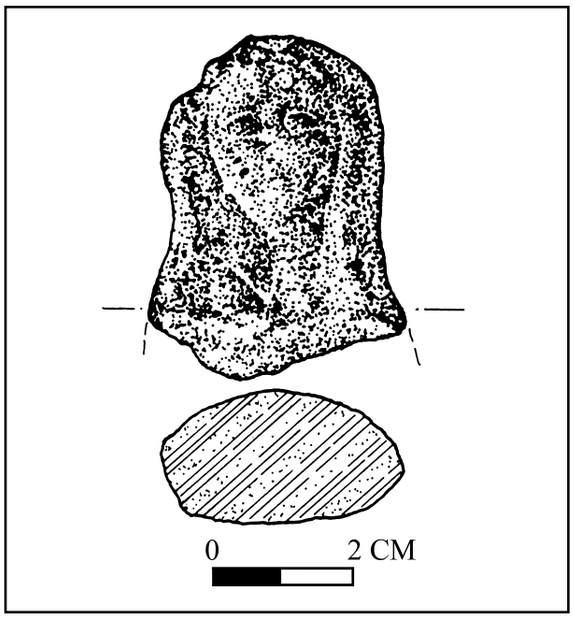
Other Possible Features

Finally, the head of this figurine, while not extant, can be reconstructed as wearing a high hat with elaborate decoration, and/or a veil with some adornment (Dornemann 1983: 130, n. 6; Meyers 1987: 119).

Object 2102: Head Fragment of a Female

Object 74.2102 was found near the springs by Khirbet ʿAyun Musa (also known as Khirbet el-Meshhed and designated Site 108 by the Hesban Survey). It measures 45 mm and dates to Iron Age II (8th-7th centuries B.C.). It is allocated to the Horn Archaeological Museum (HAM 74.0409).

Figure 5.2 Head Fragment of a Female.



Description

The head of this figurine (fig. 5.2) is only partially preserved. The right side is chipped off and the surface badly worn. Its surface color is light red (2.5YR 6/8), and the core is grey (2.5YR 6/0) with white and grey grits. The head is solid, but the molded face was inserted by means of a still visible tenon to a hollow corpus now missing. The oval face had a slightly pointed cheek. Its oval eyes and nose were indicated by means of incised lines. No other details of the face are visible. The hair falls at either side of the head and presumably below the neck. It covers the ears and broadens at the bottom. The possibility of a veil cannot be excluded. See also ʾAmr 1980: no. 73.

Parallels

Parallels include heads from Megiddo: May 1935: pl. XXIII: M 1389, M 2925, XXVI: M 4551, M 1500 and Tell Jemmeh: Petrie 1928: pl. XXXV: 6, 11, 13, 29, 32, XXXVI: 39, 46.

Human Pillar Figurines

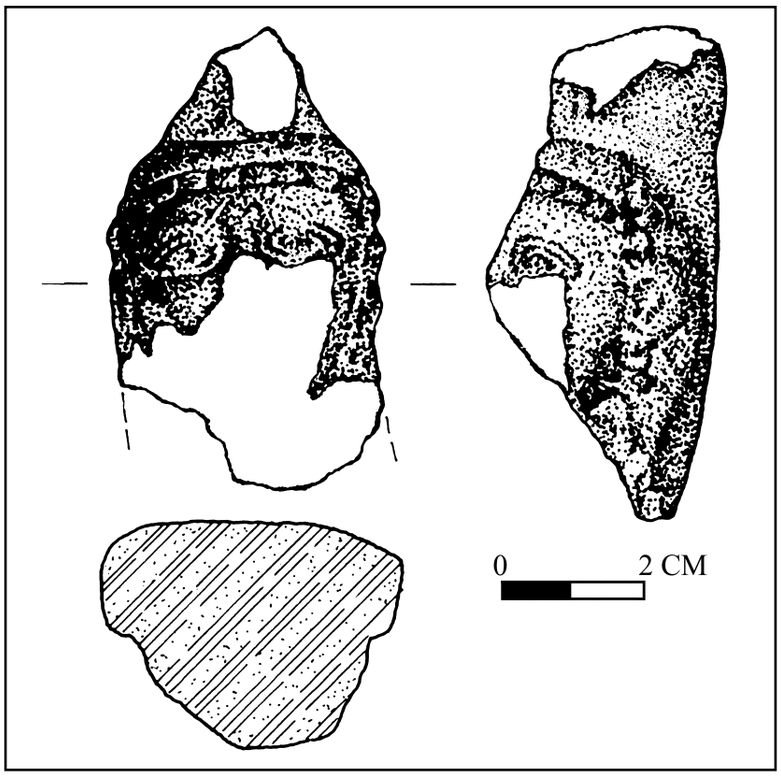
Usually the term "pillar" in connection with figurines is understood as a bell-shaped cylinder, either solid or hollow, representing the stylized body of the given figurine (Pritchard 1943: 56; Meyers 1987: 119; Stern 1989: 27). Following Holland (1975.1: 178-215; 1977: 121-22), we will use this term in a broadened sense. The first two categories in Holland's typological scheme are A: Human Pillar Figurines with Solid, Hand-Modelled Bodies and B: Human Pillar Figurines with Hollow Bodies. The bell-shaped bodies of the latter (B) category are almost always wheelmade. The former (A) category includes, apart from objects with typical bell-shaped torsos/stands, all free-standing/seated figurines with stylized or plastically modelled legs and so-called "stopper" figures. Type A was "over-whelmingly the most popular form" in Palestine (Holland 1977: 124-25).

Most figurines of both categories were made in two pieces. Albright (1943: 138-41) gave a detailed description of pillar figurine manufacture. The head was modelled separately, often in a mold, then, by means of a tenon, inserted into a hole at the top of the pillar. The joint was then covered with extra clay to form the neck.

When dealing with fragments, such as heads, it is sometimes difficult to attribute them to one of the above groups. This is done basically by comparing them to complete objects. Hence, our approach here.

Object 2102 was apparently attached to a hollow "pillar" as can be seen from parallels. It falls into Holland's Type B.VI and Dornemann's "pillar" category of his Group II. Females depicted on figurines with hollow pillars usually support the breasts or hold some object, most often a disc that is identified as a drum or a tambourine (see above). They also, in rare cases, hold a baby, a bird, or different elongated object, usually identified as a musical instrument such as a flute or oboe (Holland 1975: 207-10). Object 2102 has Egyptianized features, typical of many types of female figurines. Since only the head is extant, whether the figurine originally supported the breasts or held a drum is not known. The latter is perhaps more likely, as all of the female figurines found in the region, which are known to the author, are of this style. As already mentioned, this figurine was found at Khirbet ʿAyun Musa (Khirbet el-Meshhed), north of Mt. Nebo. Parts of two other female plaque figurines, both holding a drum, were found at the same site some years earlier (Glueck 1934: 24, 27, fig. 8; Henke 1959: pl. 4b). In addition, two other figurines of the wheelmade "pillar" type, also holding

Figure 5.3 Head of a Rider.



a drum, came from a tomb on Mt. Nebo (Saller 1966: figs. 28.1, 28.2). It is apparent that there is a high percentage of drum-holding figurines, both plaques and pillar-like, in the Mt. Nebo region.

Object 76.unreg: Head of a Rider

This unregistered figurine (fig. 5.3) was found on the surface of Tell Hesban in 1976. It measures 63 mm, and dates from the 7th to the middle of the 6th century B.C. It is located in the Horn Archaeological Musem (HAM 76.0026).

Description

A portion of the head is all that is preserved of this figurine. The lower face is obliterated and the upper part of the helmet, and the rider's torso as well as the horse it was presumably riding are missing. The slip is red (10R 5/8); its surface light red (10R 6/8) and the core light grey (5YR 7/1) with grey grits. It is solid with a molded face. The other parts were apparently hand-modelled. The back is flat, giving a plaque-like or a high-relief appearance to the figurine. The hat bends forward and becomes narrower on both sides toward its apex. A single band of raised, half-oval pellets extends below the hat indicating the hair fringe. The hair style cannot be determined. Only the left earring is extant, consisting of a ring with three pendants, of which the two front ones are preserved. The almond-shaped eyes with incised pupils are surrounded by a ridge representing the eyelids. Separate ridges, representing the eyebrows, do not appear. ʾAmr 1980: no. 74.

Parallels

Parallels include one from the Amman Citadel (Dornemann 1983: fig. 89.1 = ʾAmr 1980: no. 74). A parallel to the helmet comes from Tell el-Mazar (Yassine 1988: pl. XIII.3 bottom center = ʾAmr 1980: no. 125). Parallels to the earrings from Transjordan appear on a bearded male head from the Dayan Collection (probably originally from Abu Alanda; Ornan 1983: 14-16, fig. 11 = 1986: no. 13), a complete female statue from Khirbet el-

Hajjar (Ibrahim 1971: pls. 1, 3 = Zayadine 1991: fig. 42), a complete male statue from Arajan/Irjan (Khairi 1970: pl. 1f = Zayadine 1991: fig. 44) and on a mold of a female face from Amman Tomb F (Dornemann 1983: fig. 88.3).

Riders

The category of "Riders" might better be called "Horse and Rider Figurines." In the case of figurine 76.unreg. however, the horse is missing.

The horse-and-rider motif in terracotta is widely distributed in the Near East, including Palestine, in the Iron Age, Persian period and later. In Holland's classification (1975), this motif includes four types. Type D: Solid Hand-Modelled Horses and Riders includes horses with and without riders, since many times, when dealing with fragments, it is difficult to determine their classification. The riders' faces are either handmade or molded in this type. Subtype II: Horses with Riders of Type H: Hollow Hand-modelled Animal Figurines Not Spouted consists of hollow horses with solid riders. Subtype I: Horses of Type I: Hollow Wheel-Made Figurines Not Spouted is analogous to the previous group, but consists of solid riders attached to wheelmade horses. Type J: Zoomorphic Spouted Vessels with its subtypes III: Cylindrical Wheelmade Jugs and IV: Cylindrical Hand-made Jugs comprises solid riders on hollow wheelmade and hand-modelled horses with spouted heads and with small holes on their backs (on this type see below). Finally, the horse-and-rider motif appears on rhyta, Holland's Type K.V.

The rider Head of Object 76.unreg. presumably sat on a horse which is now missing. Apparently the horse was solid as in the case of the two complete figurines from Meqabelein. Hollow horses, however, cannot be excluded since horses of Holland's Type D and Type H are in many cases similar iconographically.

The factors that identify the human head of Object 76.unreg. as a rider include the fact that the back of the head is flat, giving an impression of high relief. The same modeling can be seen on complete horse-and-rider figurines from Central Transjordan (Meqabelein: Harding 1950: 46-47, pls. XIII.1 and XIV.2; Tell el-Mazar: Yassine 1988: pl. XIII.1 upper left). The cap is similar to those worn by other terracotta riders (see below). Finally, red slip is a typical feature on this type of figurines.

Helmets

The rider from Hesban wears a cap or helmet. Though not completely preserved, it can be reconstructed as having its crest bent forward and apparently a little bit backward. An analogous helmet may be seen on an Urartian miniature figure from Toprak Kale (Barnett 1954: pl. II). Helmets with bent crests were popular among other Anatolian nations and the Greeks (Barnett and Falkner 1962: fig. 2; Stern 1982: 174, fig. 6). One may also point to a rider from Assur (Klengel-Brandt 1978: no. 293). The helmet on a figurine from Tell el-Mazar, which may be parallel to that of Object 76.unreg., is described by ʾAmr as being of "Persian style" (ʾAmr 1980: no. 125; cf. Yassine 1988: fig. on book jacket, pl. XIII.3 bottom center). We may assume that this type of helmet, either metal or more probably leather, originated in the region of southwestern Anatolia or northern Syria and was popular during the period of Assyrian rule and later.

Hair Styles

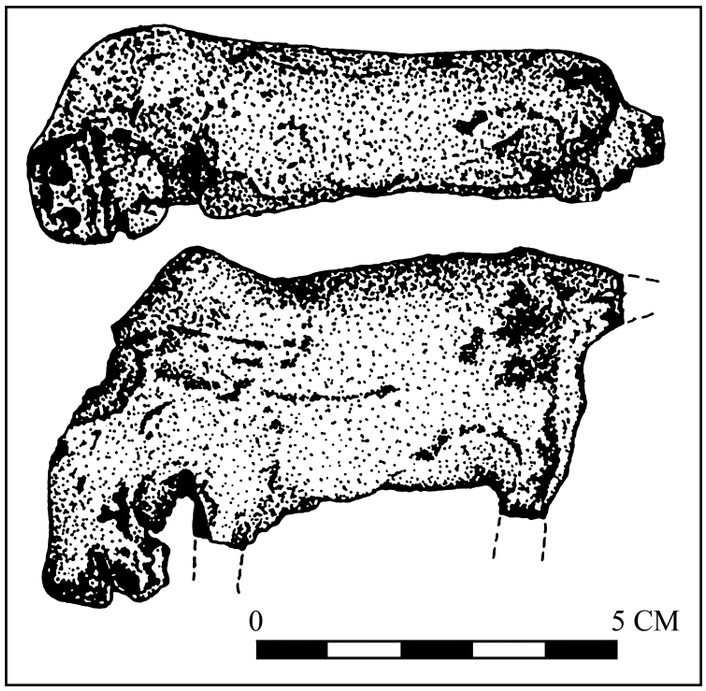
ʾAmr identifies the raised half-oval pellets extending below the helmet on the Rider's Head of Object 76.unreg. as part of the helmet itself (1980). A more plausible interpretation is that the row of pellets represents the hair fringe. This is a typical Assyrian convention for depicting hair on human foreheads, especially the part that emerges from below the headdress (cf. Parrot 1961: fig. 24). Similar pellets "which seem to represent small curls" can be found on the double-faced female heads from Amman (Dornemann 1983: 159).

Earring

The only discernible earring on any of the figurines discussed so far is that of the one in the left ear of Object 76.unreg. It consists of a ring/crescent(?) with pendants attached to it. Apparently there were three such pendants. Yet, only the middle, and traces of the front pendants are visible. The back one, although not preserved, must have existed, as can be concluded from the arrangement of the remaining two pendants around the ring. Since the figurine surface is obliterated, it is not certain whether the pendants were shaped into a ball, a cup or a rounded-isosceles cross.

Earrings in the form of a crescent with three pendants are found on several objects from

Figure 5.4 Fragment of a Bovine.



Transjordan. Three of them—a female face figurine mold from Tomb F in Amman (Dornemann 1983: fig. 88.3), a bearded male head, possibly from Abu Alanda (Ornan 1983: 14-16, fig. 11; 1986: no. 13) and a complete female statue from Khirbet el-Hajjar (Ibrahim 1971: pls. 1, 3)—have ball-shaped pendants, of which the front and the back ones are placed obliquely. On the other hand a complete male statue from Arajan/Irjan has earrings with cup-shaped pendants, of which the front and the back ones are set horizontally (Khairi 1970: pl. 1f = Zayadine 1991: fig. 44).

Ammonite earrings with three ball-shaped pendants are analogous to representations on ivories, which functioned as decorations on furniture and horse frontlets, found at Nimrud, Khorsabad (Dur-Sharrukin) and Arslan Tash. These depict a "naked goddess" and "lady in the window" (cf. fig. 13.1; Barnett 1975: pl. LXIII.S146; possibly Mallowan 1966: 583, fig. 549; Loud, Altman 1938: pl. 51.30; Thureau-Dangin 1931: pl. XXXVI.56-58). Similar earrings, but with two ball-shaped pendants, are also popular on ivory specimens (e.g. two items from Khorsabad; cf. Loud and Altman 1938: pls. 51.29 and 51.31; see also Dornemann 1983: 133). The triple-armed earrings of Maxwell-Hyslop's Type 4 (1971: 241-42, fig. 127.6-27), which do not have ball-shaped pendants, are very common as part of the adornment of kings and officials on Assyrian reliefs from the 9th-7th centuries B.C.

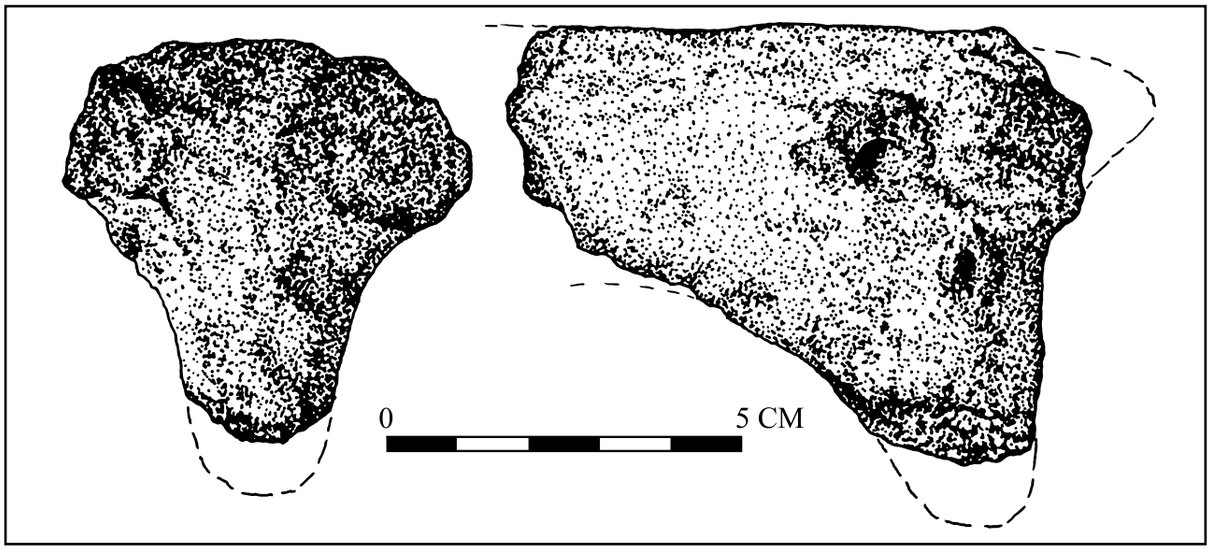
The earrings depicted on Ammonite objects can be considered a local variation of the examples represented in Assyrian art (Ibrahim 1971: 93; Abou Assaf 1980: 41-42; Ornan 1983: 18, n. 63). Such forms are found in the northern provinces of the Assyrian Empire as well as in Urartu and Greece, with dates extending into the 7th century B.C. (Barnett 1975: 51, fig. 15; Maxwell-Hyslop 1971: 242, 244, fig. 133, pl. 224).

In addition, Dornemann points to other triple-armed earrings on the double female heads from the Amman Citadel, but they represent a later development (1983: 133, n. 2).

Object 73.unreg: Fragment of a Bovine

This unregistered fragment (fig. 5.4) was found at Tell er-Rameh (Hesban Survey Site 95) in 1973 and is located in the Horn Archaeological Museum (HAM 73.0045). It dates to the Iron Age and measures 72 mm.

Figure 5.5 Head and Neck Fragment of a Bovine.



Description

It is possible that the right side of this animal figurine may have fallen apart while it was baking in the kiln. The legs, horns, ears and tail are broken off. The slip is worn in many places and is a very pale brown in color (10YR 8/3.5). Its surface is a weak red (10R 5/8-2.5YR 5/2) with a grey core (5YR 5/1). It is solid and hand-modelled with incised features. The fragment consists of a torso of a bovine with a conical hump at the base of the neck. Its large head leans forward, its nostrils are drilled very deep and its mouth is open. The remaining part of the tail indicates an arched position in relation to the torso (cf. ʾAmr 1980: no. 268).

Parallels

Parallels are found at Tell Jemmeh (Petrie 1928: pl. XXXVII.14) and Deir ʿAlla (ʾAmr 1980: no. 165). A parallel to the muzzle is found at Tell Jemmeh (Petrie 1928: pl. XXXVII.2); cf. also the bronze bull figurines from Hazor (Yadin *et al*. 1961: pl. CCCXLI) and the "Bull Site" (Mazar 1982: fig. 2).

Object 2581: Head and Neck Fragment of a Bovine

Object 76.2581 (fig. 5.5); was found during the 1976 season at Tell Hesban in locus B.2:137:337 and dates to the Iron Age II/early Persian period. It measures 75 mm and was allocated to the Horn Archaeological Museum (HAM 76.0357).

Description

Parts of head and neck of this figurine are preserved. The muzzle end and horns are missing and its surface is heavily worn. The ware is very poor in quality. Its surface is reddish yellow (5YR 7/8) with a grey core (7.5YR 5/0) and plenty of white grits. It is solid and hand-modelled with applied and incised features.

This fragment is a massive bovine head with traces of wide horns. The ears are indicated by deep drilling and the eyes are marked by a small lump of clay pressed against the head with a fingernail incision.

Parallels

Parallels include a head from el-Medeineh (Glueck 1970: fig. 95 right) and three examples from Tell Jemmeh (Holland 1975.2: pl. 22.3, pl. 22.4, fig. 39.2 = pl. 22.5).

Solid Hand-Modelled Bovinae

This group, in which we include two objects (figurines 73.unreg. and 2581), corresponds to Holland's Type F. The first fragment (73.unreg.)

can be identified as Bovine because of a hump on its back. Thus, the figurine fits within Holland's subgroup I: Hump-backed within Type F. The manner in which the mouth and nostrils are modelled and the form of the tail are also typical for Bovine representations in terracotta.

Complete figurines help in identifying the Head of fragment 2581 as a bovine as well. Traces of wide horns are still visible. One cannot, however, assign the object to either of Holland's subgroups of Type F: I: Hump-backed or II: Without Humped Back. For such undetermined fragments, Holland created subgroup III: Fragments Belonging to Types F.I or F.II.

Object 817: Rear-end Part of an Animal

This fragment (71.0817; HAM 71.0273) was found at Tell Hesban in locus B.4:15:47. It measures 56 mm, and dates to Iron Age II.

Description

Only the back part of this animal figurine (fig. 5.6) is preserved. The visible torso section was chosen for petrographic research. Its is solid and hand-modelled. Its surface is pinkish white in color (5YR 8/2) with a pinkish grey core (5YR 7/2) and red and grey grits. It is also decorated with black paint (5YR 2.5/1). The torso has the shape of a horizontally positioned oval. The short hind legs have flat feet, slightly flaring at their base, and the broken tail has left a visible spot. The torso was painted with five parallel and criss-crossing stripes. See also ʾAmr 1980: no. 267.

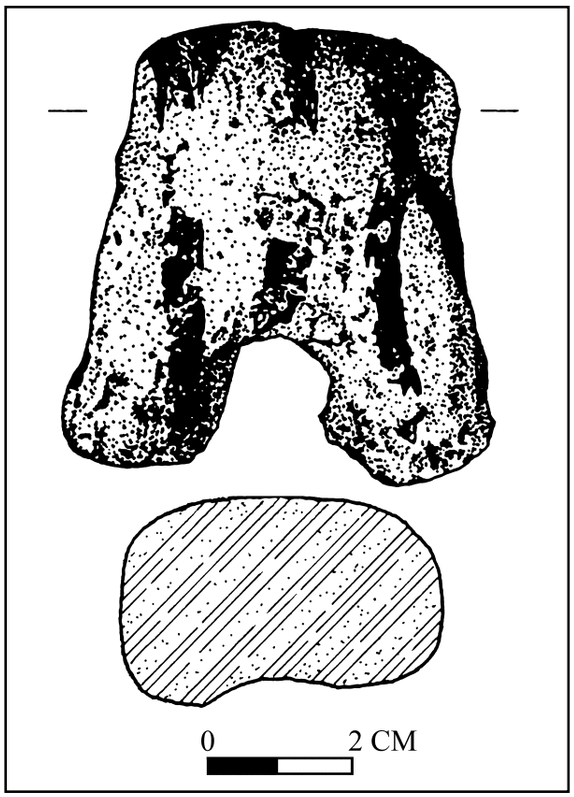
Parallels

No definite parallels have been found. Partial parallels include a flat foot with solid hindquarter from Megiddo (May 1935: pl. XXXV. M 4557); solid hindquarters painted with a design from Tawilan (ʾAmr 1980: no. 259) and Samaria (Holland 1975.2: pl. 47.6) and two objects from Tell Jemmeh (Holland 1975.2: fig. 70.1, pl. 23.8; fig. 70.4, pl. 26.12).

Solid Hand-Modelled Miscellaneous Animals

Holland places most of his unidentified animals in Type G. We have assigned Object 817 to subgroup III: Hindquarters Not Identified. There is one parallel to the animal's flat foot. This is a hindquarter from Megiddo which May identified as an elephant (May 1935: 34, pl. XXXV. M 4557). Holland accepts May's conclusion and lists another fragment from Jerusalem as well (1975: 253-54). If this is correct, these two items would be the only known clay elephant fragments from Palestine. If Object 817 also represents this animal, its allocation in Holland's classification would be Type G.I.d, in which "I" indicates species identified. The painted decoration might indicate a harness.

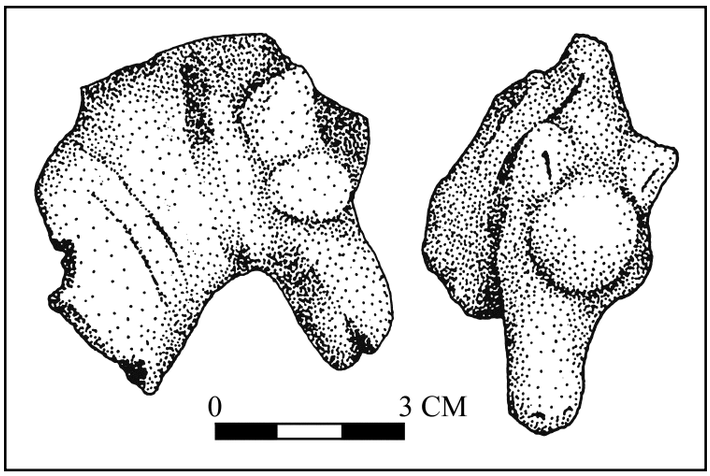
Figure 5.6 Rear-end part of an Animal.



Object 1576: Head and Neck Fragment of a Horse

This fragment (fig. 5.7) is located in the Amman Museum (without a number; ʾAmr 1980: no. 122). It was found at Tell Hesban in locus B.1:143:395. It dates from the Late Iron Age II/early Persian period (7th-6th centuries B.C.) and measures 62 mm.

Figure 5.7 Head and Neck Fragment of a Horse.



Description

Only the head and neck of this horse figurine are preserved. The upper fragment of its mane is also chipped off. The clay type is fine. It has a black-grey core with no grits, and is medium fired with a tan slip and a decoration of black stripes (Hesban Objects Book). According to ʾAmr 1980: no. 122, it has a "red grey ware."

The figurine is hollow and hand-modelled with applied and incised features. It is a carefully modelled head of a horse with an elongated muzzle, thick neck and prominent mane. The eyes were made separately from a small lump of clay which was then fixed into projected sockets and incised horizontally. The pointed ears are vertically incised. The nostrils are marked with two drilled holes. It has an open incised mouth. A conical raised and black-painted disc on the forehead was made separately and then applied. Black-painted stripes represent a harness on the muzzle and upper neck with a white-painted stripe between incised lines representing a piece of harness on the lower neck (see also Sauer 1975: pl. XVI.A; ʾAmr 1980: no. 122).

Parallels

Parallels include hollow horse figurines at Hesban (Objects 651 and 1681); Amman (Dornemann 1983: fig. 89.5); Amman (Zayadine 1973: pl. XXIV.2); a complete solid horse figurine from Tell el-Mazar (Yassine 1988: pl. XIII.2 upper left = ʾAmr 1980: no. 123) and two solid horse-and-rider figurines from Meqabelein (Harding 1950: 46-47, pls. XIII.1 and XIV.2 = Zayadine 1987: nos. 137 and 138).

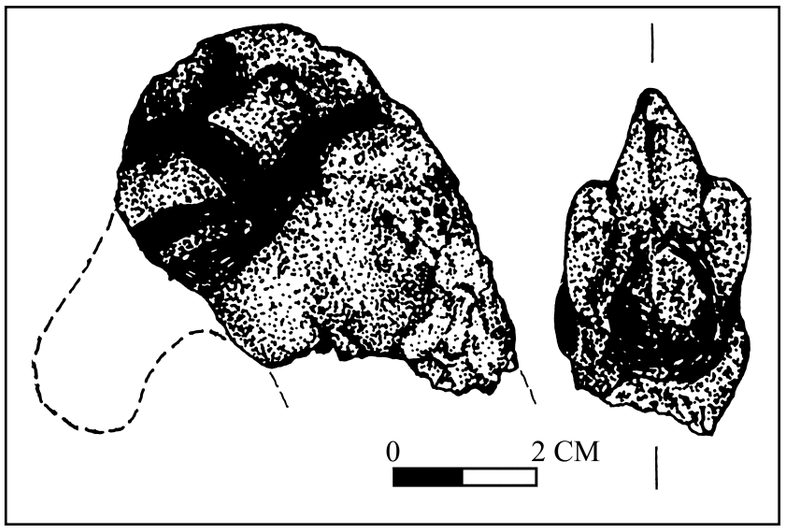
Object 651: Head Fragment of a Horse

Fragment 71.0651(HAM 71.0194) was found at Tell Hesban in 1971 in locus B.1:78:227. It measures 58 mm, and dates to the late Iron Age II/early Persian period (7th-6th centuries B.C.).

Description

The upper part of the head and neck of this horse figurine (fig. 5.8) is preserved. It is hollow and hand-modelled with applied (and incised?) features. The head possesses an applied mane and ears. Its mane goes between the ears forming a black-painted disc-like forelock. The left eye is visible. The paint is faded and there is postdepositional burning on the right side of the neck. The surface color is reddish yellow-light red (5YR 7/6-2.5YR 6/8) with a red core (2.5YR 5/8) and white grits. There is also black paint (5YR 2.5/1) on it. The painted harness is similar to that of Object 1576 (cf. also ʾAmr 1980: no. 266).

Figure 5.8 Head Fragment of a Horse.



Parallels

See Object 1576 (above) for parallels.

Object 1681: Head and Neck Fragment of a Horse

Found in locus C.2:44:503, this fragment (73.1681; HAM 73.0352), measures 45 mm and dates to the late Iron Age II/early Persian period (7th-6th centuries B.C.).

Description

The muzzle with the left eye and upper neck of this horse figurine (fig. 5.9) are preserved. It is hollow and hand-modelled with applied features. The muzzle is shorter and thicker than in Object 1576. The preserved left eye was applied as a pellet. An open, incised mouth is indicated, and an incised line divides the head and neck. Its core is reddish brown (2.5YR 5/4), and it is decorated with a red slip (2.5YR 5/6) and black paint (5YR 2.5/1). The black-painted harness is similar to that of Object 1576.

Parallels

For parallels cf. Object 1576 above.

Object 1595: Head and Neck Fragment of a Horse

Now located in the Horn Archaeological Museum (HAM 73. 0290), Hesban figurine 1595

Figure 5.9 Head and Neck Fragment of a Horse.

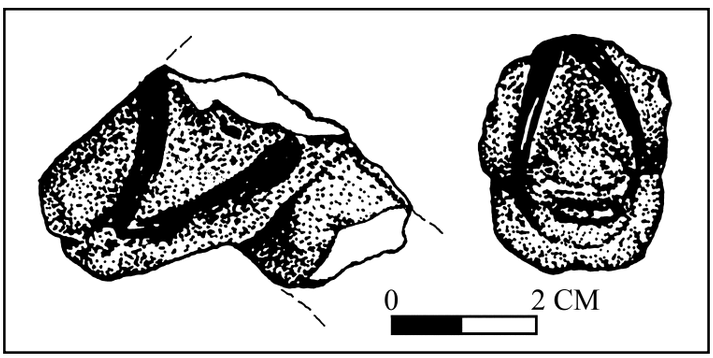
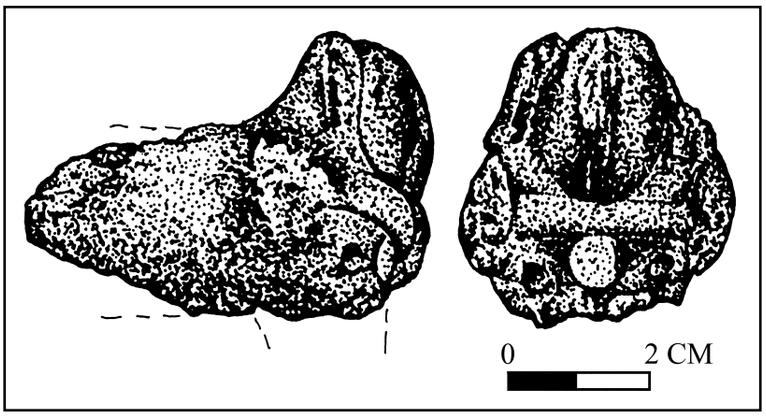


Figure 5.10 Head and Neck Fragment of a Horse.



was found in locus C.2:40-48:475. It is slightly smaller (56 mm) than Object 651 and also dates to the Iron Age II/early Persian period.

Description

This hollow, hand-modelled fragment of a horse figurine (fig. 5.10) with applied and incised features is only preserved in the upper head and neck. Part of the left ear and muzzle are missing. Its surface is dark grey (5YR 4/1) in color with a grey core (10YR 6/1) and black grits. The pointed right ear is incised in front with a vertical stroke. A fragment of the applied mane is visible and broadens considerably between the ears, forming a forelock in the shape of an oval disc. The disc is vertically incised and the left blinder is seen below a missing left ear. The right blinder is chipped off and an applied headband, representing the harness, goes below the forelock and between the blinders. The eyes are deeply drilled (originally encrusted?). There is a round shallow depression between the eyes and just below the headband.

Parallels

The closest analogy is Hesban Object 1631. Other parallels include four solid horse heads from Deir ʿAlla (Holland 1975.2: fig. 27.1-4). In terms of applied blinders, the zoomorphic vessels from the Amman Citadel (ʾAmr 1980: no. 182), Pella (ʾAmr 1980: no. 150) and Buseirah (ʾAmr 1980: no. 146) are close. See also the hollow figurine from Deir ʿAlla (ʾAmr 1980: no. 152).

Object 1793: Head and Neck Fragment of a Horse

Hesban figurine (74.1793; HAM 0134) was found in locus B.4:205:403. It measures 53 mm, and dates to the Iron Age II/early Persian period.

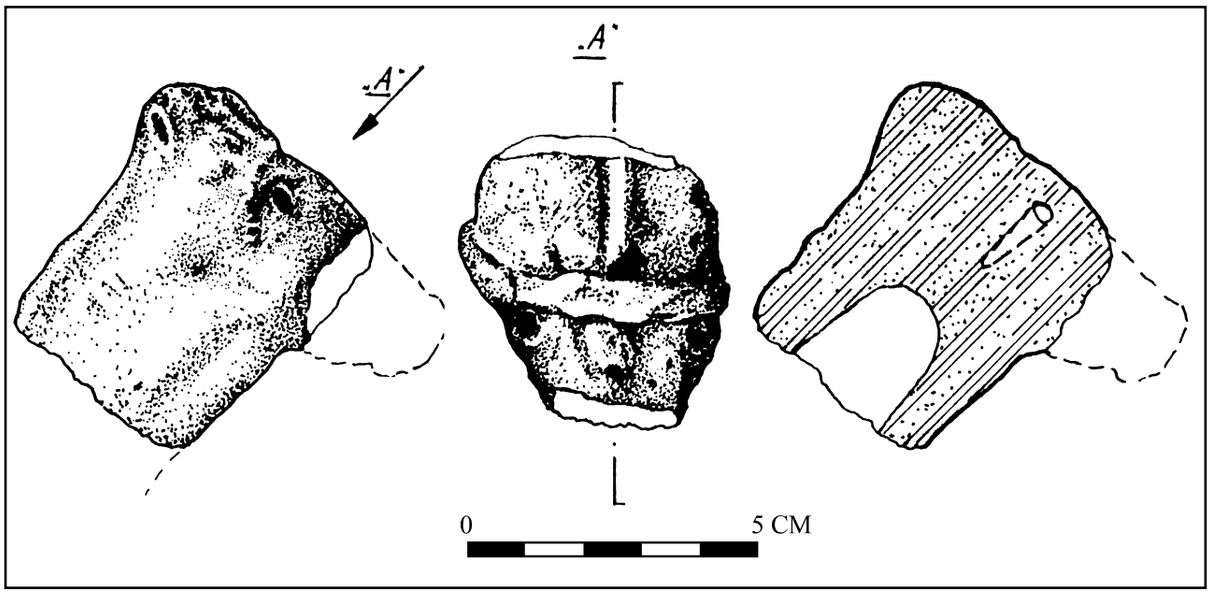
Description

Only the upper head and neck of the horse figurine (fig. 5.11) are preserved. The upper parts of ears and muzzle are missing. Traces of postdepositional firing are visible on the left side, and its light red (10R 6/8) surface is worn. It is hollow and hand-modelled with applied and incised features. It has a grey core (2.5YR 4/0) with white and grey grits. In spite of the damage, an incised vertical stroke is visible on the remaining part of the right ear. The right blinder is also recognizable. Presumably the forelock of the mane took the shape of a vertically incised disc smaller than that of Object 1595, but only the left part is preserved. An applied headband, representing a harness, goes below the forelock and between the blinders. The eyes are deeply drilled (originally encrusted?). There is an applied lump of clay in the place where Object 1595 has a round shallow depression, i.e. between the eyes and right below the headband.

Parallels

For parallels cf. 1595 above.

Figure 5.11 Head and Neck Fragment of a Horse.



Hollow Horses Not Spouted

For the limited purpose of the classification of the Hesban figurines, we will divide Holland's Type H: Hollow Hand-Modelled Animal Figurines Not Spouted into two categories: 1) Hollow Horses Not Spouted identical with his subgroup I: Horses and 2) Hollow Hand-Modelled Miscellaneous Animals Not Spouted (see below).

There are five figurines which seem to fit into the above category. These are no doubt fragments of horse-and-rider figurines identical with Holland's subgroup II: Horses and Riders of the Type H. Holland's Type H.I: Horses is not adequately divided into subgroups to fit the Hesban examples. It seems that the division Holland used in Type D: Solid Hand-Modelled Horses and Riders could be used here as well. Thus, we would have the following classes: horses without trappings, horses with painted trappings, horses with incised trappings, horses with applied trappings, and one could also specify horses with molded trappings. Figurines 1576; 651 and 1681 fit within the hollow horses with painted trappings category, and figurines 1595 and 1793 belong to the hollow horses with applied trappings subtype.

Dornemann (1983: 140-41) did not divide horse figurines according to manufacture (solid versus hollow, etc.). Instead, he differentiated them according to two basic color schemes: 1) black-white-black decoration against a pink or red background, and 2) black paint on a white slip that covers the entire figurine. The first decoration type is well-known from the Meqabelein horse-and-rider figurines and also appears on Horse Head 1576 from Hesban. One may surmise that other horse figurines with painted decoration from Hesban such as Objects 651 and 1681also belonged to the class, though their preserved fragments do not reveal white-painted stripes.

All three painted horse figurines from Hesban seem to have identical harnesses. Their characteristic feature is two bands criss-crossing on the muzzle. This feature is present on the majority of painted horse heads from central Transjordan (cf. ʾAmr 1980: nos. 115, 116, 117, 121, 123).

Disc/Forelock on Horse Foreheads

All the horse heads from Hesban with painted and applied harnesses (with the exception of Figurine 1681 where the forehead is not preserved) have an interesting emblem on their foreheads, which takes different shapes. On Figurine 1576 this takes the form of a conical raised disc, separated from the mane, whereas on Figurine 651 it is a disc connected with the mane. In both cases the disc is below ears. On Figurines 1595 and 1793 there is a

Figure 5.12 Rear-end Fragment of an Animal.

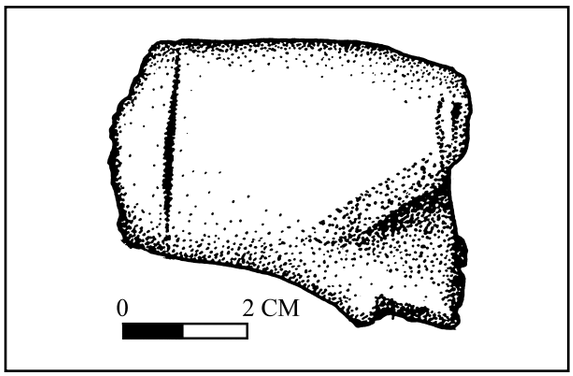
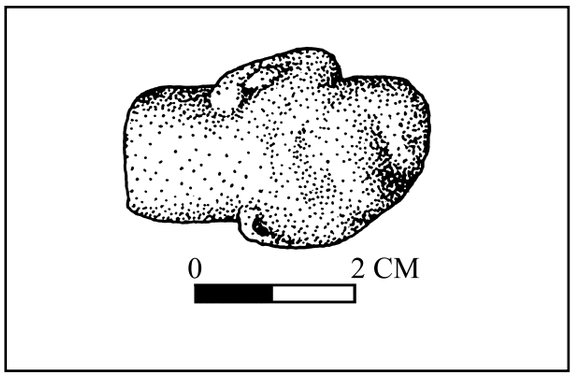


Figure 5.13 Spouted Head Fragment of a Ram.



vertically incised oval disc, either a part of, or distinct from, the mane. This emblem is very popular on horse figurines from both sides of the River Jordan.

While writing about Transjordanian examples, Dornemann (1983: 141) interpreted the emblem as simply "the shock of hair from the mane, which rests on the forehead." Assyrian reliefs show a mane style in which the front part forms a forelock (Barnett n.d. 26-27). Holland, ʾAmr, and others, however, speak not only of the forelock, but also of an applied decoration on horse foreheads which is commonly called a sun-disc (Holland 1975.1: 334-35; ʾAmr 1980: 178; McKay 1973). Elaborated emblems are popular on the decorations of horse heads on the Assyrian reliefs (Barnett n.d.: figs. on pp. 43, 84, 85 87, 89, 99).

Object 1631: Rear-end Fragment of an Animal

This fragment (fig. 5.12) is located in the Amman Museum (without a number; ʾAmr 1980: no. 256). It was found at Tell Hesban in 1973 and given the registration number 73.1631. It was found in locus B.1:143:376. Measuring 53 mm, it dates to the Iron Age II/early Persian period.

Description

This fragment is the rear part of an animal with the tail and legs missing. At some point in its curation a slice was removed from the torso and glued to the remaining part of the body. The figurine is hollow and hand-modelled. It has a grey-black core with grits and some limestone. The clay is fine, its firing is medium and it has a tan burnished slip, but there is no decoration (Hesban Objects Book; cf. ʾAmr 1980: no. 256). Following the Hesban Objects Book, ʾAmr interpreted the figurine as the "rear-end of a possible hippopotamus" (1980: no. 256). However, a horse or a bovine are also possible.

Parallels

The hollow hindqarters of a fragment from Khirbet el-Hajjar (Thompson 1972: pl. V.1 middle = ʾAmr 1980: no. 257); and two pieces from Tawilan (ʾAmr 1980: nos. 263 and 264).

Hollow Hand-Modelled Miscellaneous Animals Not Spouted

Object 1631 is a piece which can be classified under Holland's Type H. It is not possible to specify the species of this undetermined hindquarter. However, the equine or bovine families seem to be the most probable.

Object 181: Spouted Head Fragment of a Ram

Hesban Figurine 68.181 (Dept. of Antiquities) was found in locus A.1:15:46. It measures 38 mm, and is Iron Age in date.

Description

Only the head of this fragment (fig. 5.13) is preserved. The vessel body, to which this fragment was attached, was not located. Hence, its character and manufacture are undetermined. Not being available to the author, the ware of the fragment

was not examined. The head is hand-modelled and spouted with applied features. The eyes are in the form of round pellets which were applied separately, and the horns are made of separate strips of clay surrounding the eyes from below.

Parallels

Parallels include spouted-vessel fragments from Tell el-ʿUmeiri (Platt 1989: fig. 20.5, Object no. 368); Tell Jemmeh (Petrie 1928: pl. XXXIX.6) and Tell en-Naṣbeh (McCown 1947: pl. 88.30). Among hollow figurines not spouted there are parallels from Gezer (Macalister 1912: pl. CXXIV.29), Tell Abu Hawam (Hamilton 1935: fig. 102) and Tell Jemmeh (Petrie 1928: pl. XXXIX.1).

Zoomorphic Spouted Vessels

Fragment 181 from Hesban conforms to Holland's Type J: Zoomorphic Spouted Vessels, which include kernoi, bowls, jug-like vessels and others.

The Ram's Head (figurine 181) is a fragment of an undetermined vessel. Spouted ram's heads appear as parts of kernoi (Type J.I; cf. examples at Ashdod; Dothan and Freedman 1967: figs. 45.1, 47.7, pls. XXVIII.1, 6), and are also attached to the walls of other vessels such as jugs, bowls, and jars (J.VI and J.VII; with examples from Tell Jemmeh, Petrie 1928: pl. XXXIX.6; and Tell en-Naṣbeh, McCown 1947: pl. 88.30). One may hypothesize that Fragment 181 was originally attached to the wall of a bowl (cf. Holland 1975.1: 278).

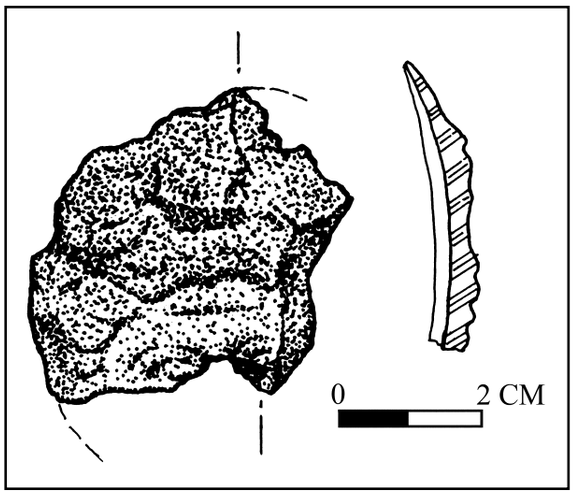
Object 885: Female Face Fragment

Hesban Figurine (71. 0885; HAM 71.0319) was found in locus C.4:13:294. It measures 45 mm, and dates to the Early Roman IV period.

Description

The upper right side of the face with the eyes and part of the hairdo are preserved on this fragment (fig. 5.14). The surface and core are light red (10 R 6/8). The face and headdress are molded in low relief. Fingerprints are visible on the depressed back as a result of manual pressing into a mold. The partly preserved oval eyes on the flat face have sharply outlined, swollen eyelids and incised eyebrows. On the forehead there is a single horizontal wrinkle. The elaborate hairdo consists of waving curls parted in the center, above which the first curl is a cylinder-shaped horizontal knot.

Figure 5.14 Female Face Fragment.



Parallels

Parallels include figurines of the nude Aphrodite from Jerash (Iliffe 1945: pl. II.24-26); lamps with human masks from Jerash (Iliffe 1945: pl. VII.121-22) and apliques also from Jerash (Iliffe 1945: pl. V.86).

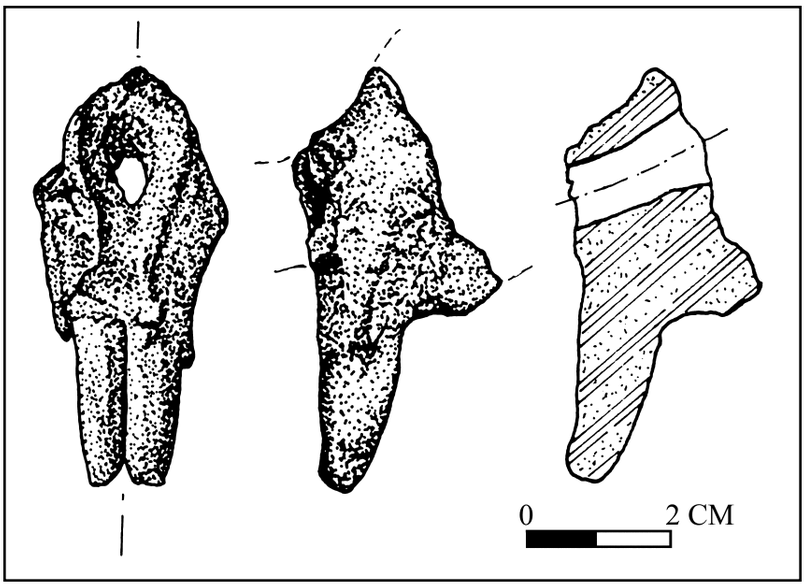
Object 2735: Zoomorphic Spouted Vessel Fragment?

Allocated to the Horn Archaeological Museum (HAM 76. 0494), this figurine (fig. 5.15) from Hesban (76.2735) was found in locus C.5:174:437. It measures 58 mm, and dates to sometime within the Early Roman-late Byzantine periods.

Description

Only part of a spout(?) of this figurine is preserved. It is broken in places and the object's body is missing. The surface is light red (2.5YR 6/8) in color with a grey core (2.5YR 6/0). The preserved piece is partly hand-modelled with applied features and has a hole going through it. The character and manufacture of the whole object are undetermined. The main features of the fragment are the hole (spout?) and two applied elongated details (horns?).

Figure 5.15 Zoomorphic Spouted Vessel Fragment?



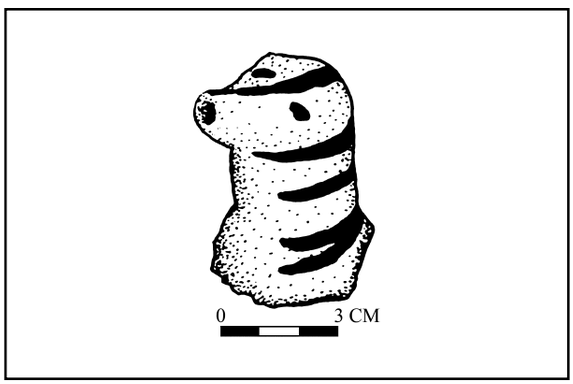
Parallels

None.

Object 2781: Zoomorphic Spouted Vessel Fragment

Hesban Figurine (76.2781) is allocated to the Dept. of Antiquities and was found in probe G.14 locus 16:36. It dates to the Umayyad period and measures 75 mm.

Figure 5.16 Zoomorphic Spouted Vessel Fragment.



Description

Only the spouted head of this fragment (fig. 5.16) is preserved. The body of the vessel was not located, but was apparently wheelmade with applied features (Lawlor 1978: 194). Nothing is available in terms of the nature of the ware, and the author has been unable to examine it. The head is hand-modelled and spouted with a painted decoration. The ears are missing and the head has an elongated muzzle. The broken horns(?) left visible spots. Dark strokes of paint decorate the head and neck. The eyes are indicated by painted dots.

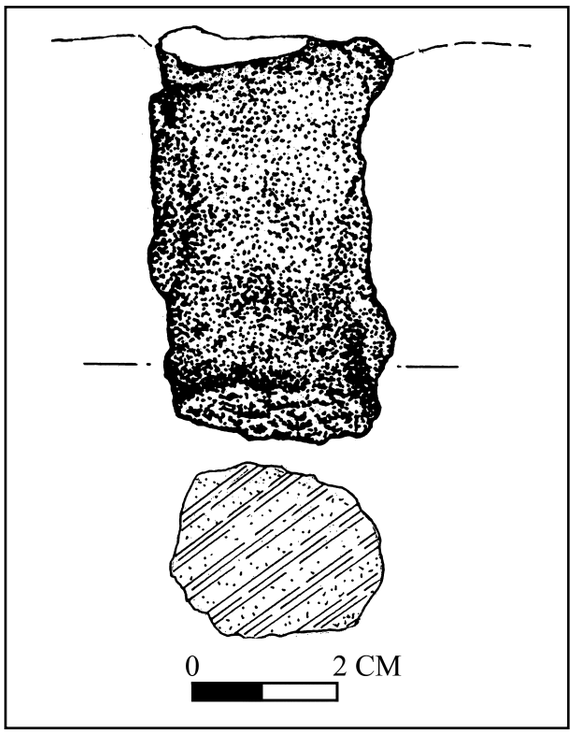
Parallels

Parallels include a painted head fragment from Tell Arad (Aharoni and Amiran 1964: 138, pl. 38.D) and a complete vessel from Khirbet el-Mefjar, near Jericho (Baramki 1944: pl. XVIII.4). Parallel Byzantine forms are available from Mahayy (Humbert and Desreumaux 1987: no. 331) and Petra (Zayadine 1982: 389, pl. CXXXVII.96).

Object 266: Unidentified Fragment

This fragment (68.266; HAM 68.0222) was found at Tell Hesban in 1968 in locus C.1:6:158. It measures 52 mm, and is Mamluk in date.

Figure 5.17 Unidentified Fragment.



Description

This fragment (fig. 5.17) is broken on one end. Its surface is red (2.5 YR 5.5/8) with a grey core (2.5YR 5/0) and white grits. It is solid and hand-modelled. The preserved fragment was fashioned in the form of a cylinder with a slightly concave, broken end. Pinching is indicated at the unbroken end.

Parallels

None.

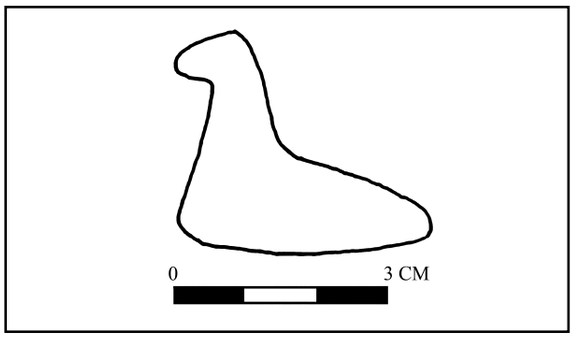
Object 2414: Bird Figurine

This figurine (76.2414; fig. 5.18) is located in the Amman Museum (J.15336). It was found at Tell Hesban in 1976 in locus A.10:4:7. It measures 36 mm, and dates to the Mamluk period.

Description

This figurine is complete. There is no information on the ware and the author has been unable to examine it personally. It is appears to be a solid and hand-modelled figurine of a stylized bird (dove?), revealing only the main segments of a body, neck and head with no details.

Figure 5.18 Bird Figurine.



Parallels

None.

Post-Persian Fragments

Excavations at Tell Hesban have yielded five terracotta fragments dated to the Roman, Byzantine, and Islamic Periods.

The Face Fragment (Figurine 885) might belong to a double-molded hollow figurine representing Aphrodite, similar to several Roman-period figurines from Jerash (Iliffe 1945: pl. II.24-26). The thin edges of this fragment and the somewhat flat appearance of the face may also suggest that it was an applique on a lamp, vessel, or other terracotta object (see Iliffe 1945: pl. VII.121-22; V.86 for parallels). The female represented on this fragment might have worn a *stephane* (a headband or diadem) on her head just as Iliffe (1945: 6) suggests for some of the Jerash figurines.

Little can be said about Fragment 2735. A hole through its body indicates that it may have been a spouted vessel.

The Zoomorphic Spout (Figurine 2781) most likely belonged to a vessel form called an *aquamanile*, which was popular in Palestine during the Byzantine and Umayyad periods (Zayadine 1982: 389; Humbert and Desreumaux 1987: no. 331). Complete vessels of this type are known from Khirbet el-Mefjar near Jericho (Baramki 1944: pl. XVIII.4) and Mahayy in Transjordan (Humbert and

Desreumaux 1987: no. 331). Another unpublished example is housed in the Archaeological Museum at Madaba.

The Unidentified Fragment 266 was found in a Mamluk layer and has no definite parallels. It might have been a leg of an animal. The pinching at the one unbroken end might indicate a foot. Since the layer contained some pottery from the Iron Age, this object might have belonged to that period. If that is the case, several features would point to the possibility that the object represented a stylized rider: 1) the cylinder-like body has a slightly concave base, which indicates that it may have been joined to a rounded horseback; 2) since the joint was not hard, if this was a rider, it fell apart; and 3) at the other end, the body has pinching typical of face modeling in Holland's Type D.XV (Holland 1975.2: fig. 35.6; ʾAmr 1980: no. 119). Such an interpretation, though possible, is far from proven.

Figurine 2414 is a complete miniature stylized bird figurine, most likely representing a dove. It probably functioned as a gaming piece.

Dating

This study was undertaken before the final reports on the Iron Age at Hesban and the pottery have appeared. However, as most of the figurines were found on the surface, in topsoil, or in mixed contexts, stratigraphic dating is not very helpful. Thus, we will not offer very precise stratigraphic dates. Parallels will be more helpful.

Iron Age

The Bovine Figurine (Object 73.unreg.) was a surface find from Tell er-Rameh (Site 95 of the Hesban Survey), which is located in the Jordan Valley. The latest pottery found at this site by Glueck was from the Roman period. Ibach's survey found Iron Age II/Persian, Iron Age II, and Iron Age I and some Early Bronze Age pottery (Ibach 1976: 124; 1987: 22). Since Petrie's dating of the parallel humped bovine figurines from Tell Jemmeh is not helpful, one cannot offer a more precise dating for the bovine figurine than the Iron Age.

The Ram's Head (Object 181) was found at Tell Hesban in Square A.1 where the remains of the northeast corner of a Byzantine church (Strata 7-8, ca. A.D. 450-661), preceded by a late Roman basilica (Strata 12-13 ca. A.D. 135-324), were located (Van Elderen 1978: 24-27). The object was found in Locus 15, which according to the excavators was a very loose, crumbly layer with Byzantine, Roman and possibly Hellenistic and Iron Age I pottery. (Van Elderen 1969: 144-45). Since the latest pottery from this locus is Byzantine in date, the deposition of this figurine fragment should presumably date from this same time. However, since some Iron Age pottery was found in this context, one cannot exclude the possibility that the object originally belonged to that time. In addition, the closest parallel is a Tell el-ʿUmeiri ram-spouted vessel fragment, which is dated to late Iron Age II (Platt 1989: fig. 20.5 second row from the top).

Iron Age I (1200-900 B.C.)

Only Female Plaque (Object 2826) can with certainty be dated to Iron Age I. This object was found on the west slope at the edge of the mound (Area C) in a fill which was dumped there from elsewhere on the tell. No structural remains dating to Iron Age I were found in Area C. A preliminary report of the final season at Hesban assigned the dump, where the figurine was found, to Stratum XXIV (General Stratum 19; cf. Mitchel 1992:7). It contained only Iron Age I pottery (1200-1000 B.C.) (Mare 1978: 69; Boraas and Geraty 1978: 16). Since the deposition of the Iron Age I dump layers happened in a "somewhat orderly way," it was possible to distinguish different phases within the stratum. Thus, the locus in which the figurine was found represents a later, Iron Age I B/C, stage (Mare 1978: 69-70). Dornemann's (1983: 131) dating of his Group I of female figurines falls between the late 11th and early 9th century B.C. Preliminary observations (above) suggest the same dating for Object 2826. Analysis of the style of the necklace may bring further clarification.

As previously mentioned, the closest parallels to the necklace on the Hesban figurine are those on a figurine from Megiddo (May 1935: pl. XXVIII.M 5418) and on the double-faced heads from the Amman Citadel. The Megiddo figurine was found in Stratum V dated by the first excavators to the end of the early Iron Age (May 1935: pl. XXVIII.M 5418) and in Yadin's revised chronology to the 10th century B.C. (Mazar 1990: 381-82). One might suggest the turn of the 11th century B.C. as the approximate dating for this figurine. However, double-faced heads have been dated to the second half

of the 7th century B.C. and even the early 6th century B.C. (Dornemann 1983: 162; cf. Zayadine 1973: 35). Though redating of the heads is theoretically possible, as they were found in a much later context, Dornemann's conclusion is widely accepted and supported on paleographical grounds (Bordreuil 1973: 37-39; Abou Assaf 1980: 72, 75). Therefore, it would seem that the choker necklace had a long period of use, of over three centuries. A somewhat different choker necklace on the ivory head from Nimrud, dated to the 8th century B.C., appears to confirm this observation.

One may also mention the figurine head (of a human?) found at Tell Hesban in 1963 (see above), which was dated by Paul Lapp to Iron Age I (Anderson 1963-64: 1-2; cf. Vyhmeister 1968: 175). In his dating, however, Lapp may have been following Glueck's (1934: 24) initial framework for this type of figurines from Baluah and el-Medeineh, which he later saw as coming from Iron Age II (Glueck 1970: 188).

Iron Age II

The Female Head (Object 2102) was found on the surface at ʿAyun Musa (Hesban Survey site 108), near the spring, along with predominantly Iron Age I pottery and a few Iron Age II/Persian, Roman and Byzantine-period sherds (Ibach 1976: 123, n. 14; 1987: 25). However, an Iron Age I dating seems to be too early for the Female Head, even though pottery of that period is dominant. Dornemann (1983: 131) notes that figurines with molded heads and "hollow clay cones" are usually dated to the 8th and 7th centuries B.C. Most of the parallels from Tell Jemmeh and Megiddo also date to this time. One should probably propose the same date for this Female Head. However, the earlier date should not be totally ruled out of consideration.

The Animal Fragment (Object 817) was unearthed in a robber trench of an early Byzantine layer (Stratum IV ca. A.D. 400-10; Sauer 1973: 44-45). As Iron Age pottery was also found in locus B.4:15, one cannot exclude the possibility that the figurine belonged to a much earlier period. An similar object from Megiddo is dated to the 10th-8th centuries B.C. (May 1935: 2; Mazar 1990: 382), a suggesting an Iron Age II dating for Figurine 817 as well.

Late Iron Age II

A more precise dating within Iron Age II is apparently possible in the case of one of the Rider Heads (Object 76.unreg.). Parallel horse-and-rider figurines from Meqabelein have been dated to the 7th century B.C. (Zayadine 1991: 45), the second half of the 7th century B.C. (Harding 1950: 44-45), around 700 B.C. (Dornemann 1983: 137), and the first half of the 6th century B.C. (Stern 1982: 162, 167). Dornemann (1983: 132, 137-38) dates a parallel Transjordanian terracotta rider's head from the Amman Citadel to around 700 B.C. The horse-and-rider figurine found in the Tell el-Mazar cemetery might be dated to the Iron Age IIC/Persian period (Sauer 1979: 72).

One of the factors which come to bear upon the date is the Assyrian-like earrings and hairstyles of the figurines. Other objects such as reliefs, sculptures, and ivories that illustrate the triple-armed kind of earrings do not seem to have postdated the middle of the 6th century B.C. even outside of the Assyrian domain (Decamps de Mertzenfeld 1954: 142; Mallowan 1966: 203-10; Maxwell-Hyslop 1971: 242 and Barnett 1975: 51).

These factors would seem to indicate a date between the beginning of the 8th and the middle of the 7th century B.C. for Rider's Head 76.unreg. from Hesban.

Iron Age II/Early Persian

Six figurines were found in Area B. Of these, five of them (Objects 2581, 1576, 651, 1793, and 1631) were found within the layers deposited in a large, open-air plastered water reservoir. The reservoir, found in Squares B.1, B.2 and B.4, was roughly square, 17.5 m on a side and ca. 7 m deep. The construction of the reservoir was originally dated to Stratum 17 (9th century B.C.) although Sauer (1994: 241-44) has more recently redated it to Stratum 18 (10th century B.C.). The reservoir was apparently abandoned in the early Persian Period (ca. 500 B.C.), at which time the city ceased to be occupied for about three centuries (Horn 1982: 22-24).

Figurines 2581; 1576 and 1631 were found in the clay layer (Locus B.1:143 = B.2:137) on the bottom of the reservoir. The plastered floor of the reservoir was immediately below. This clay layer,

which belonged to Stratum 16 (7th century-500 B.C), constituted the final phase of the reservoir's utilization (Sauer 1978: 46-48). Figurine parallels from Tell Jemmeh (Holland 1975.1: 247) support this dating for the Bovine Head (Object 2581).

Above the clay layer, there were soil layers belonging to Hellenistic Stratum 15. These layers comprised a massive fill containing basically Iron Age II/Persian-period material with comparatively few Iron Age I and Hellenistic sherds. This material was scraped down from the acropolis and deposited in the abandoned reservoir during the Hellenistic Period (Sauer 1976: 54-59; 1978: 44-46). Figurines 651 and 1793 were found in this dump.

To the previously discussed figurines, we will add the painted Horse Head (Object 1681). It was found on the western slope of the tell in a water-laid soil layer from Stratum 16. Apart from Iron Age II/Persian-period pottery, it also included some Iron Age I material (Thompson 1975: 177-78; Mare 1978: 67-68). On the basis of the parallel examples, having the same kind of modelling and the characteristic painted pottery, one can place the Horse Heads (1576; 651 and 1681) in the 7th/6th centuries B.C. (ʾAmr 1980: 179; Dornemann 1983: 137; Sauer 1973: 69-70; Lugenbeal and Sauer 1972: 62-64).

Horse Head Figurine 1595 was found in basically the same context as Figurine 1681, and is similar to Figurine 1793 which was found in the reservoir. Since there are analogous representations to these figurines at other sites, these horse heads should also be dated to the Iron Age II/early Persian period.

Roman Period

The Female Face (Figurine 885) was unearthed on the western slope of Tell Hesban (Area C) within an Early Byzantine wall (ca. A.D. 324-450; Strata 9-11) which was reused up to the Mamluk Period (Strata 2-3). Pottery found between the wall's stones ranged from the Mamluk down to the Iron Age II/Persian Periods. (Parker 1978: 77, 98-99). Figurine 885 had probably been part of a double molded and hollow figurine. The characteristic hairstyle and face modeling are definitely early and apparently belong to the second half of the early Roman IV Period (A.D. 70-135). Parallels from a group of figurines and lamps found in a Jerash cave confirm this. The Jerash figurines and evidently Fragment 885 as well appear to have been manufactured after the formation of the *Provincia Arabia* and represent the movement toward Romanization in this part of Transjordan (Iliffe 1945).

Byzantine and Islamic Periods

Fragment 2735 came from the dump-erosion deposit of the late Byzantine Period (Stratum 7; ca. A.D. 614-661; cf. Mare 1978: 57). The pottery found in locus C.5:174, apart from the late Byzantine sherds, included early Roman material as well. If this fragment was part of a vessel the same type as Fragment 2781, its stratigraphic dating would be consistent with the period of the vessel's occurrence elsewhere (see below).

The Zoomorphic Spout (Object 2781) was discovered immediately east of the easternmost wall of a church founded in the Byzantine period and which functioned during the Umayyad period as well. The church was built some 200 m north of Tell Hesban. Locus G.14:16, where the object was found, was "a light gray, compact clayey soil" sealing against the outer wall of the church, and contained predominantly Umayyad pottery. It lay under a large destruction layer, also dated to the Umayyad period (Lawlor 1978: 194; 1980).

The stratigraphy and the ceramic evidence for this Zoomorphic Spout is consistent with a similar fragment from Tel Arad, found in the Arab stratum and dated to the 7th-8th centuries A.D. (Aharoni and Amiran 1964: 132-33). Another parallel is a complete vessel from Khirbet el-Mefjar dated to the 8th century A.D. (Baramki 1944: 65). More examples of this class of vessels are known from the Byzantine Period (5th century A.D.) from Mahayy (Humbert, Desreumaux 1987: no. 331) and Petra (Zayadine 1982: 389, pl. CXXXVII.17, 18, 96). Thus, the form of zoomorphic vessel to which the Hesban fragment belonged apparently originated in the Byzantine Period and continued into the Umayyad times.

An unidentified Fragment (Object 266) was found at the edge of the western slope (Area C) of Tell Hesban in a wash layer from a period of erosion dated to the early Mamluk Period (Stratum 3). The layer contained pottery from the Iron Age through the Islamic period, with Mamluk material dominating (Thompson 1969: 138-41; Mare 1978: 53). Object 266 has no definite parallels from either the Iron Age or later periods. It apparently dates to the Mamluk Period.

A Bird Figurine (2414) was discovered in the vicinity of the Mamluk bath complex (Strata 2-3) on the acropolis of Tell Hesban (Van Elderen 1978: 22). The preservation of this object is exceptional.

Cultural and Historical Perspective in the Iron Age

The problem of discerning definite stylistic, iconographical and other interconnections among figurines is apparent. It is especially difficult when working with a small group of terracottas which come from a frontier zone with a complicated history in the Iron Age such as those from the Hesban region (Vyhmeister 1968, 1989). The northern part of Mishor lay on the edges of four small kingdoms (Ammon, Moab, Israel and Judah) who fought against each other. These kingdoms also shared the same cultural background stemming from the Canaanite Late Bronze Age. They were further influenced politically and culturally by the Sea Peoples, Phoenicians, Aramaeans, Assyrians, Babylonians, and Persians, if not directly under their control at times.

Transjordanian Iron Age figurines share the same general style and features of figurines from Cisjordan. Also, the ratio of male to female, and human to animal figurines from the sites excavated and surveyed by the Hesban Expedition taken together, in spite of their small quantity, seems to correspond with those from Western Palestine. This is due mainly to corresponding ideas which were shared on both sides of the Jordan River, as well as direct involvement of the Cisjordanian kingdoms in Transjordan at times.

Some figurines from Tell Hesban and vicinity may reflect Cisjordanian presence or at least involvement in the the region.

Female plaque figurines holding a drum, so popular in Transjordan, are also common in Western Palestine. Such features as the necklace, disc decoration and girdle on the Female Plaque 2816 have close analogies to Megiddo (see above). Since this figurine came from Iron Age I dump material, it may have belonged to the Reubenite/Gadite occupation of the site predating Mesha's conquest of the area in the 9th century B.C. Apart from the northern Mishor area (Hesban, Mt. Nebo), Transjordanian Iron Age I female plaque figurines holding a drum also come from the Jordan Valley (Deir ʿAlla), Gilead (Irbed) and Amman (Dornemann 1983: 129-31).

The Bovine Figurine (73,unreg.) seems to be similar to a one "humped" figurine from Deir ʿAlla (ʾAmr 1980: no. 165). Closer analogies, however, come from the other side of the Jordan River at Tell Jemmeh. Still other humpbacked bovines have been found at Jerusalem and Gezer (Holland 1975.1: 44-45; Macalister 1912: pl. CXXV.2). Since Figurine 73,unreg. was found at Tell er-Rameh in the Jordan Valley, at a site that has been identified with Livias/Beth-haram, the site's relationship with other centers in the Valley and southern Palestine (Philistea, Judah) in the Iron Age seems evident (Ibach 1976: 124; 1987: 22).

Nevertheless, the affairs of the Iron Age Transjordan kingdoms were not oriented economically or geographically to the west. Rather, the political entities on both sides of the River Jordan had routes headed to the north (cf. Glueck 1970: 180-81). From this direction one can identify influence from both Phoenicia and Assyria in the terracottas from Tell Hesban.

In addition to the Phoenician features in Transjordanian culture (mentioned above), we may add the type of earring seen on the Rider Head 76.unreg. (cf. Homès-Fredericq 1987). Earrings with either two or three distinctive ball-shaped pendants appear on the ivories from Nimrud (a group in the Loftus collection also reflects strong Egyptian influence), Khorsabad, and Arslan Tash reflect Phoenician rather than North Syrian style (Barnett 1935; I. Winter 1976). One may hypothesize that this type of earring was a distinguishing feature of Phoenician works in ivory.

Neo-Assyrian impact on the culture of Transjordan has long been noticed. Assyrian influence on pottery, glyptic art, sculpture, onomastica, and architecture has been discerned (cf. Abou Assaf 1980; Bennett 1982; Weippert 1987; Kletter 1991; Bienkowski 1992).

It appears that the terracotta figurines from Hesban also reflect an Assyrian and/or North Syrian influence. This is the case in terms of the helmet and hair treatment on Rider's Head 76.unreg. and perhaps the mane treatment on Horse Figurines 1576, 651, 1681, 1595 and 1793. Depiction of horse riding, including that on terracotta, may have also have originated in Assyria or North Syria (cf. Bennett 1982: Dornemann 1983: 137-38). The question remains, however, whether the impact was the result of direct involvement of the Assyrians in Transjordan or indirect influence through intermediators, perhaps the Phoenicians (cf. Oppenheim

1967: 253). Some Assyrian features also continued into the Persian Period.

It seems possible to discern among the figurines from Hesban those features revealing a flavor typical of the Ammonites of Central Transjordan. Included here is the above-mentioned Rider's Head 76.unreg., as well as Horse Heads 1576, 651 and 1681.

Rider's Head 76.unreg. reveals a cosmopolitan (Phoenician and Assyrian) style, typical of other horse-and-rider figurines from the Amman region. Complete horse-and-rider figurines as well as fragments from Central Transjordan share some of the same features including hairstyle, face modeling, helmet style, painted decoration and rider's position. These features have been found on figurines from Amman, Meqabelein, Tell el-ʿUmeiri, and Tell el-Mazar, as well as Tell Hesban and Tell Jalul. Their geographical distribution, dating, and cosmopolitan style is shared with the Amman district sculptures. This would seem to point to an Ammonite cultural horizon as their direct source of inspiration (cf. Dornemann 1983: 137).

Horse Heads 1576, 651 and 1681 may have been fragments of horse-and-rider figurines similar to Rider's Head 73.unreg. The black-white-black painted decoration, which occurs on Horse Head 1576 could also have originally been present on the other two heads. This same decoration appears on horse-and-rider figurines from Amman, Meqabelein and Tell el-ʿUmeiri. This type of figurines may either be hollow or solid. The distribution of the figurines with such decoration, unknown so far in other regions of Transjordan and Western Palestine, seems to confirm the existence of a special stylistic tradition characteristic of the Ammonite region (cf. Dornemann 1983: 140).

Apart from presumably Ammonite traits on the Hesban terracottas, one could point to Bovine Head 2581 as having close parallels in the Moabite region. Parallels for this figurine come from el-Medeineh on Wadi eth-Themed, some 15 km southeast of Jalul (Glueck 1970: figs. 95 right and 96; cf. Miller 1989: 25). These solid bovine heads are not unique among Palestinian figurines. Yet, they seem to bear some local countenance characteristic of this region.

On the basis of its provenance and dating, Female Head 2102 from ʿAyun Musa may also be Moabite. Glueck describes the ruins there as a "Moabite fortress" (Glueck 1935: 110; cf. Ibach 1976: 123, n. 14). Though the closest analogies for this Female Head are from Megiddo, its dating after Mesha's conquest points to the Moabite possession of the region. The date for Figurine 2581 from Hesban also appears to fall after Mesha's conquest of the region. Certainly some northern Israelite influence may have persisted in the local culture.

Function and Symbolism

The function and symbolism of figurines have been discussed widely (ʾAmr 1980: 47-284; Fowler 1985; Hübner 1989). The different types of terracottas should be dealt with separately while examining their function. The following factors need to be taken into consideration: 1) identification of the type of fragment (e.g., whether it is a self-standing figurine, a zoomorphic vessel or model shrine); 2) the type of ware (different clays may have been used for different functions); 3) the manufacture (different techniques may have been used for different functions); 4) the preservation (e.g., ritual breaking; cf. Kertesz 1976; Stern 1989: 24); 5) the place of deposition (e.g., under the floor, in private houses, administration buildings, *favissae*, shrines, or tombs); 6) comparison with representations in other media (e.g., metal, or stone); and 7) ethnographical parallels.

The diverse functions proposed by scholars for different types of the Iron Age Palestinian figurines can be divided into two categories: religious and nonreligious. Within the religious function, some have seen figurines as representations and/or symbols of deities/idols venerated at public shrines or in the private household cult; as amulets or talismans with magic powers to ward off demons; votive offerings representing the supplicators, priests/priestesses; or even foundation deposits. Within the nonreligious function, figurines are said to have been used as utilitarian containers (in case of zoomorphic and anthropomorphic vessels), toys/dolls, bric-a-brac, or pieces of art.

Scholars differ as to which figurine type played which role. Generally, however, most figurines have been given cultic significance and some scholars even favor an exclusive view that "both the human and animal figurines were fashioned for religious purposes and were absolutely not toys" (ʾAmr 1980: 4, 284). The work of ethnographers seems to support the view that "relatively few toys exist in some of the simpler, traditional societies of the Near East"; what is more, "children in some modern Arabic cultures ... are strongly discouraged

from playing at all" (Manor 1987: 2, 5). Similar observations were also made in an ethnographical survey of the Madaba Plains Project, Jordan, headed by Dorothy Irvin. Here it was found that children of Bedouin families play with simple toys, utilizing natural objects and discarded things of the adult world to which they give new meanings. Adults do not generally fabricate toys for their children.

Yet, ethnographical research, though very helpful, has to be looked at with caution when drawing conclusions for ancient cultures. The attitude toward play in modern Arab countries could be religiously conditioned. Also, concentration on cultic elements in figurine research is rather a reflection, as Manor (1987) stresses, of traditional and biased avenues of archaeological research. If archaeologists were more concerned with social organization and if they placed "toys in their theoretical frameworks and research designs," the picture might be somewhat different (Manor 1987: 2, 7). Excavators do sometimes label figurines, especially those representing animals, as toys. They do so not because they have found them in a characteristic "children's" context—they have not recognized such so far—or have systematically analyzed the issue, but because of their feeling that somewhere the remains of children's material culture must be found.

An analogy may be drawn from that of the material culture of women. Now that scholars have started asking questions and searching for the remains of feminine activity in ancient times, they have been finding many examples of it that have not been previously recognized. For example, female terracotta figurines are now considered an expression of a feminine religion (cf. U. Winter 1983 and Lipiski 1986).

A utilitarian function for zoomorphic spouted vessels such as Fragment 181 was also proposed by Macalister (1912.2: 182), who suggested that this kind of vessel was an apparatus for feeding infants. Holland (1975.1: 276-77) agreed, and noted that the extreme narrowness of the spout was ideally suited for feeding infants. Certainly, this feeding could also have had some cultic dimensions.

One may theorize that a terracotta could have played several functions. Objects such as ceramic stands played cultic roles and were reused after being discarded for other functions, as the data from Hazor indicates (Yadin 1975: 113-14). By analogy, cultic figurines, after their "desacralisation," or even while their cultic role was still in force, might have been utilized by children. However, no evidence seems to have been found for this so far.

Still another view treats some Iron Age figurines and vessels as art objects. Dever (1990: 157) insists that "the modeling of common farm animals in clay was probably a natural impulse, so not all of the zoomorphic figurines need be interpreted culticalally." Similarly, Holland (1975.1: 278, 280) suggests that some terracottas "were not utilitarian and may have been used as cultic objects or simply made as expressions of Iron Age art." However, according to others (cf. e.g., Keel 1978: 7-11), in the conceptual worldview of ancient Near Eastern peoples, things were not made to be looked upon and admired; they served specific and pragmatic ends in everyday life. Such artistic ends and pure utilitarian functions, nevertheless, can be traced in terracotta fragments of later periods characterized by Greek inspiration.

In summary, "no single interpretive model can exclusively be used" (Manor 1987: 6). Thus, figurines representing humans and animals, as well as vessels with anthropomorphic and zoomorphic motifs might have played different roles. The primary function of most of them seems to have been cultic. Yet many of them may have served utilitarian ends, including that of toys. Still others, if not most, could have played several roles, either simultaneously or consecutively.

As to the seemingly dominant cultic role, figurines were primarily connected with domestic life (fertility, childbirth, food preparation and curing diseases). They were also used in magic rituals and as votive offerings. Hence, they were an expression of folk religion rather than that of the public or official variety. With some exceptions, they were probably not intended to represent deities (cf. Fowler 1985).

As most, if not all, of the figurines, excavated by the Hesban Expedition, were found outside of their original context, we will not try to attibute specific functions to them.

Conclusion

The term "figurine" may sometimes be misleading. This popular expression tends to be used by archaeologists to indicate any terracotta fragment carrying anthropomorphic or zoomorphic motifs. However, these fragments may have been parts of different types of objects: figurines proper (i.e. self-

standing figures), vessels, stands or so called shrine models, etc. Holland includes all these categories and still others under the term "plastic art." The Heshbon Expedition "figurines" represent most of the essential types in Holland's typology ("A" through "J," with the exception of "E," plus Type "L").

Tell Hesban has yielded very few Iron Age "figurines" (11 pieces) compared to other sites in Transjordan. For example, Tell Deir ʿAlla yielded around 200 pieces. The Iron Age remains at Hesban were very scarce, however, since they "had been removed already in ancient times by subsequent building operations" (Horn 1982: 25).

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Chapter Six

AN EARLY ROMAN FENESTRATED BOWL FROM HESBAN

Ralph E. Hendrix

Chapter Six

An Early Roman Fenestrated Bowl From Hesban

Introduction

Nearly 2000 years after being smashed, and 13 years after being carefully collected during the 1976 field season at Hesban, a very unusual fenestrated bowl was reconstructed at the Horn Archaeological Museum. The pieces were found in the Hesban Cemetery in Tomb F.27, which, according to the preliminary report (Davis 1978: 135), was first dug and used during the early part of the Late Roman period (A.D. 135-195).

Physical Description

Reconstructed from 64 pieces, the fenestrated bowl (HAM 89.0001) is now almost complete (fig. 6.1). It measures 27.3 cm in diameter, 80.3 cm in circumference, and varies from 19.0 to 19.6 cm in height. It is divided horizontally into three sections: the rim, the fenestrations, and the curved bottom and base. Due to the relatively small base, the vessel appears visually divided into thirds, each division demarcated by a horizontal band.

The rim is 5.3 cm high varying in thickness from 0.6 to 0.8 cm, thinner where it springs from the vertical flats, and thicker as it rises. The thick, everted rim is slightly pendant and exhibits wheel marks along its outer surface. A flaking, weak red slip (10R 5/4) is evidenced on both inner and outer surfaces of the rim. A rounded, horizontal incision (0.1 cm) cuts along the bottom of the rim section, providing a definite border between the rim and the fenestrated section.

The fenestrated section, which consists of 13 posts and 13 windows, is about 7.0 cm high. Each of the flat vertical posts measure about 5.5 cm tall, 3.0 cm wide, and varies from 0.5 to 0.9 cm thick. Each post is excised by three deep angular cuts (0.2 cm deep) which form four angular ridges. The deep excisions are not entirely uniform in width. Flecks of red slip appear on the outer surfaces of the posts, but are lacking on the inner surfaces except where it ran over the corners and edges onto the interior. A round incised band, 0.3 cm wide, separates the fenestrated section from the curbed portion below.

The curved bottom third varies from 4.6 to 5.0 cm in height. The thickness is less than the posts, averaging about 0.2 cm. This portion exhibits mud accretions and flaked red slip. Its rare split-ring base flows naturally from the curved bottom. It is 2.0 cm high and about 0.4 cm thick, and shows little indication of the red slip.

The entire piece is well-fired and uniform in consistency. It is light red 2.5YR 6/6 in color. The slip (as mentioned above) is present only on the outside of the bowl, except for the inner rim and drippings around the corners where the vertical posts join the bowl.

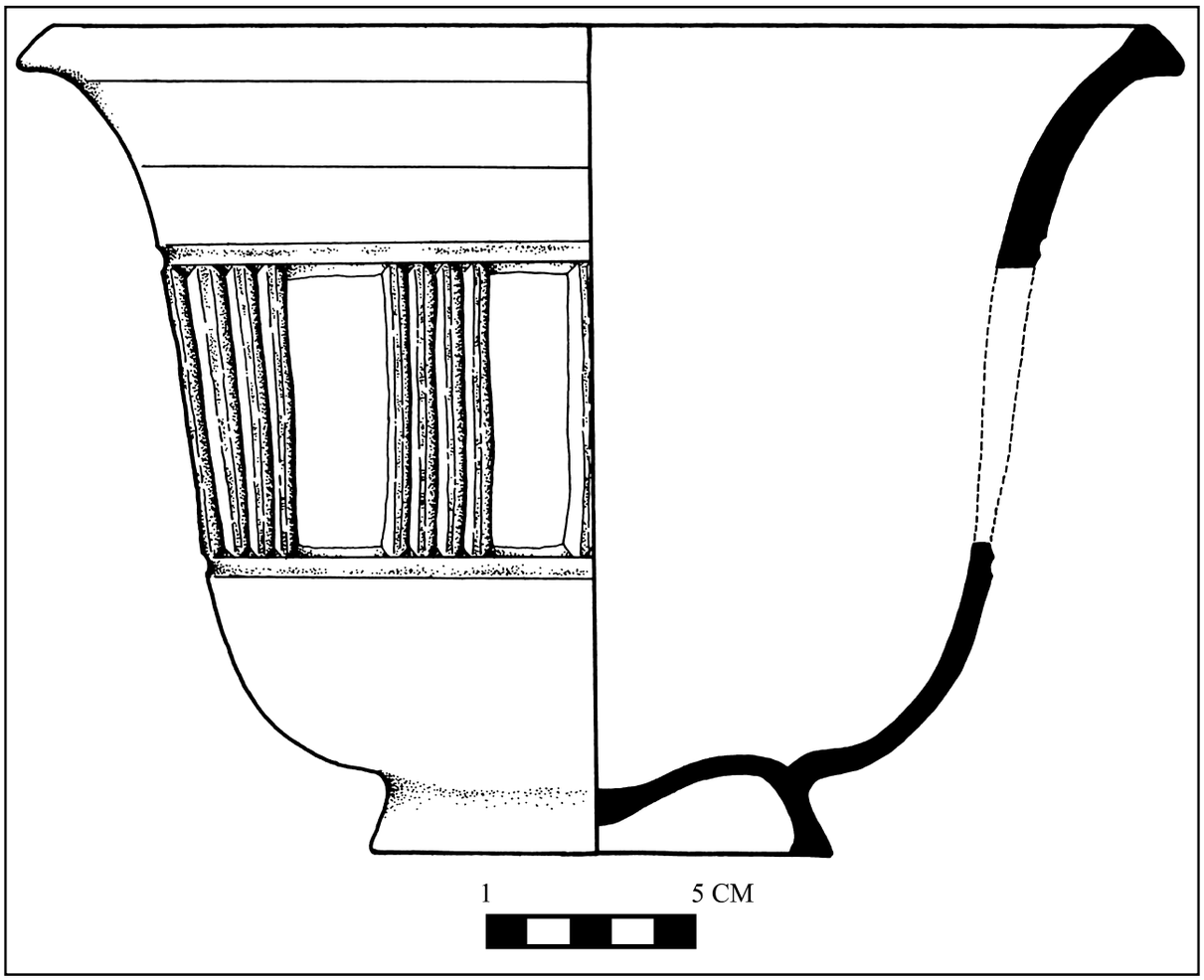
Parallel Forms

Allowing for certain features consistent with earlier Roman tombs, Davis (1978: 130, 133) suggested that the tomb's first five loculi and depressed floor were part of the original chamber, first dug and used during Late Roman I-II (A.D. 135-195). With this preliminary assignment, the search for parallel forms initially focussed on that period.

Sivan (1977: 139, fig. 1.3) has published a second-century A.D. Nabataean goblet housed in the Institute of Archaeology of the Hebrew University, Jerusalem, which parallels the general form of the Hesban piece, but is roughly one quarter the size and has no fenestrations. Khairy (1982: 277; figs. 2, 3, 7) presents three Nabataean cups with "shallow, long, oblique rouletting" equivalent to the fenestrations/flats of the Hesban piece. These Nabataean pieces exemplify a general tripartite visual design, complete with vertical rouletting in the middle section and horizontal banding, but without fenestrations.

Vyhmeister (1989: 12-13; cf. Ibach 1987: 174, 199) points out that Esbus (Hesban) was under Nabataean control from time of Herod the Great's death (4 B.C.) until the legate of Syria occupied

Figure 6.1 Early Roman Fenestrated bowl from Tomb F.27.



Nabataean territory (A.D. 106). Under these circumstances, the potters of Esbus would have had 100 years of Nabataean artistic heritage to blend with Roman aspects in the formation of their products.

A Roman beaker (Charleston n.d: fig. 22a) from Cologne has rouletted and incised decoration, exhibiting incisions with bands above and below, is a possible parallel. It dates to the first half of the 1st century A.D. However, while its incised patterns are similar to the fenestrations of the Hesban piece, it bears little overall similarity to its form.

A parallel form from Qumran is described by de Vaux (1956: 552, 553, and fig. 1.12) as a "grand gobelet évasé à base en anneau, lèvre aminicie. Terre rose chamoise, tendre, surface lissée." The color is similar. Its size is closer than any other parallel, about 18 cm in diameter and 14 cm high (or roughly two-thirds the size of the Hesban piece), and the unique "split-ring" base is precisely parallel. Nevertheless, it is not fenestrated, nor is it incised or banded.

Lapp (1961: 175) classified this Qumran form (Type 51.8) as small deep bowls with an everted rim or sides. As a general form, he dated them between 50 B.C.-A.D. 68. His fig. 2b, which he dated from 50-31 B.C., is quite similar to the Hesban bowl in size and base type, while its rim is much less everted.

De Vaux (1956: 534) associated this form with Qumran Period Ib which he ended with the "tremblement de terre" in 31 B.C. More recently, the dat-

ing of de Vaux's occupational periods have been challenged. Davies (1988: 204) has called in question de Vaux's dating of Period Ib. He argues that de Vaux's coin evidence points to a date between the late second century and 75 B.C., which he suggests is consistent with reasonable assessments of the epigraphical data. This redating would place the closest parallel for the Hesban bowl form into the Early Roman Period, about 200 years before the initial phase of Tomb F.27.

Additional evidence results from a close examination of the craftsmanship of the fenestrations on the Hesban bowl. The vessel sags noticeably. Bulging is most obvious with the vertical posts whose edges are not straight, and whose deep angular excisions are not parallel. Perhaps this bulging occurred before the piece was completely dry. If body material was removed to form the fenestrations at that time, the heavy rim would have pressed on the "green" posts making them bulge.

This procedural flaw is inconsistent with other aspects of the form which indicate a mastery of the construction process (e.g. the general regularity of form, and especially the split-ring base which required some amount of proficiency). Such lack of expertise in forming the fenestations may indicate the experimental nature of this piece instead of inadequacy on the part of the potter.

It is possible that a lone Transjordanian potter experimented with a form from just across the Jordan Rift Valley (Qumran to Esbus), added a Roman/Nabataean artistic heritage and produced this very rare fenestrated bowl. The casual application of the slip and removing the fenestrations while the piece was too "green" point to the possibility of experimentation.

Notwithstanding its technical inadequacy, the creation may have taken on the aura of an heirloom, valued for its uniqueness, if not its beauty, and was passed on during the intervening years from generation to generation. It is possible, therefore, that the piece was constructed many years before it was transferred to the tomb.

The presence of an Egyptian scarab in adjacent Tomb F.31 illustrates this heirloom factor. Horn (1978: 223-24) dated the scarab to the 19th or 20th Dynasty, and the construction of Tomb F.31 has been dated to Early Roman II-III, 31 B.C.-A.D. 70 (Davis 1978: 140; Boraas and Geraty 1978: 16). This is a difference of over 1000 years. Granted the scarab is probably more of an heirloom than the fenestrated bowl, but the principle is the same.

While exact parallels are lacking, the Hesban piece appears to be an Early Roman I Cisjordanian form (63-31 B.C.), displaying Early Roman III-IV Roman and/or Nabataean decoration (1st century A.D.), in a Late Roman I-II Roman Transjordanian provenance (second century A.D.). Assigning the piece to the Early Roman Period seems compelling due to its form and decoration. However, this would seem to be at variance with the Late Roman I-II dating of the tomb in which it was found (Davis 1978: 133). This calls for a closer look at the movements of this piece within Tomb F.27.

What Happened Inside the Tomb?

The fenestrated bowl was collected from within Tomb F.27. Analysis of the 41 marked sherds showed that they were recovered from five different loci within the tomb. Such diversity of collection loci reflects considerable activity within an enclosed place. This is consistent with the excavator's description of a "disturbed" interior (Davis 1978: 130, 133).

The majority of the sherds were collected from the floor of the tomb, in Loci 8A and 10. Locus 8A was a loosely packed, light-brown layer. Locus 8B, below it, was a reddish-brown layer with many small lime chips indicating ceiling material. The sealing slab from Loculus 1 was found in the Locus 8B material. Below Locus 8B was Locus 10, which was a greyish-brown soil layer, 30 to 40 cm below Locus 8A, contacting with bedrock. Loci 9A and 9B did not extend above Locus 10.

Davis (1978: 133) associated the 8A/9A interface (i.e. Locus 8B) with the end of the Late Roman period or the initial stages of the Early Byzantine period (ca. 324 A.D.), and marked this interface as the "initial disturbance or robbery" of the tomb (cf. Boraas and Geraty 1978: 16). The presence of sherds in Locus 10, below that of Locus 8B, would seem to indicate that the bowl was broken before the incursion.

This Locus data suggests that the vessel was initially broken into units prior to the Late Roman/ Early Byzantine incursion in the tomb. One unit consisting of parts of the rim and base (and perhaps adjacent vertical posts) found its way onto the floor (Locus 10) indicating that the bowl was broken before the sealing of the Loculus 1 slab, hence before the Late Roman/Early Byzantine incursion. A second unit consisting of most of the rim, posts, and curved portion found its way to Locus 8A at a

later date, after which Locus 8B was laid over Locus 10. Pieces were scattered about in three Loculi indicating that the fragmented bowl was probably set up from the floor into Loculus 4 (Locus 17) or Loculus 5 (Locus 16), which are just above Locus 10. The exact order of the remaining deposition is undetermined at this time. What accounts for such a movement, both before and (presumably) after robber and reburial incursions?

Roman Burial Cult

An association with the Roman cult of the dead has been suggested for Tomb F.27. (Davis 1978: 133; cf. Toynbee 1971: 223). Loculi 1 and 8 were originally sealed by stone slabs, a common practice in Roman tombs, where a cult of the dead was practiced. Davis (1978: 131) also suggests that additional indications of Roman burial practices were found in Tomb F.31.

Toynbee (1971: 50-51 63) notes the Roman burial custom of eating in the tomb of the deceased. He states that on the day of interment, a funerary feast, the *silicernium*, was eaten at the grave in honour of the dead. There was also the *cena novendialis* eaten at the grave on the ninth day after the funeral, at the end of the period of full mourning, when a libation to the *Manes* was poured out upon the actual burial. Throughout the year there were occasions on which the dead were commemorated by funeral meals eaten at the tomb by their relatives and friends on their birthdays (*dies natalis*) or when annual festivals of the dead were celebrated (*Parentalia* or *dies Parentales*, from 13 to 21 February).

Davis (1978: 132) points out that the central depression in Tomb F.27 is best explained as a drainage area similar to the *impluvium* in the Roman *atrium*, with the loculi functioning as the adjacent rooms for its occupants, or that it is merely one of many architectural features which reflect Roman house design. Toynbee (1971: 53) holds that besides honoring the dead, the purpose of grave-goods was to serve the deseased and help them feel at home in the afterlife.

The existence of a Roman burial cult including a recognizable house architecture and periodic meals appears to be evident in Tomb F.27. If such a ritual was performed here, it might explain the presence of the fenestrated bowl among the burial equipment, either as a food dish, or as a personal possession. It may also explain the fracture of the piece before the disturbance of the Late Roman/ Early Byzantine tomb, a fracture linked with repetitive entrance into the tomb for the purpose of conducting the burial ritual.

Summary

The fenestrated bowl from Hesban appears to be an heirloom piece; a synthesis of Early Roman form and Nabataean decoration with the added motif of fenestrations. It entered its Late Roman resting place either as part of the deceased's personal belongings, or as part of the burial cult equipment.

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Chapter Seven

SCARABS FROM HESBAN

Siegfried H. Horn

with a note by
Elizabeth E. Platt

Chapter Seven

Scarabs From Hesban

Introduction

Four scarabs were found during the excavations at Hesban, only one of which was found on the tell, and in a context that is consistent with the time in which it was manufactured. The other three were found in Roman- and Byzantine-period tombs. The four scarabs are treated here according to the chronological sequence of their origin and not according to their findspots or the sequence of discovery (see Table 7.1).

Object 2525: a Scarab of the 19th or 20th Dynasty

This scarab (pl. 7.1) was found during the 1976 excavation season in an Early Roman Tomb (F.31). It is now in the Archaeological Museum in Amman. It is made of gray steatite and measures 15 mm × 11 mm × 7 mm. Its back and sides belong to the simplest and most common types of scarabs and provide no help in determining its age, since they are found in nearly all periods of Egyptian history when scarabs were produced.

However, its belly side carries the inscription *ỉmn-Reʿ* in the center, the *nb*-sign to the left, and the *wʿb*-sign to the right. This inscription can be translated "Amen-Raʿ is lord of purity," or "Pure is the lord Amen-Raʿ." A close parallel to this scarab is another one of almost identical dimensions in the Cairo Museum, which is attributed by Newberry (1907: 191, pl. VIII, no. 36760) to the 19th or 20th Dynasty.

The *wʿb*-hieroglyph usually depicts either a sitting man pouring out a jar of water or a human leg over which a jar of water is being pouring out. From the 18th Dynasty on it appears, as on the Hesban scarab, without either the sitting man or the leg, but with the same meaning (Erman and Grapow 1926: 282). Scarabs with *ỉmn* inscriptions were most common in the 19th Dynasty (Rowe 1936: 180-85, nos. 750-73). For these reasons one is inclined to attribute this scarab to either the 19th or possibly the 20th Dynasty.

It is quite surprising to find an Egyptian scarab, undoubtedly an imported piece, in a tomb on the fringe of the Roman world more than a thousand years after it had been brought into circulation. One can only speculate as to how it found its way to the highlands of Transjordan, where Egyptian objects are rarely found in excavations. It must have been a cherished heirloom which had been passed on from generation to generation until someone put it, together with other funerary objects, into the tomb of the scarab's last owner, so that the beloved dead would enjoy this cherished object in the afterlife just as much as he had enjoyed it during his life on earth.

Plate 7.1 Object 2525.

Table 7.1 Scarabs from Hesban.

Object No.	Material	Dimensions	Color	Locus	Date	Remarks
719	faience	1.0 × 0.85 × 0.65	N8	F.6:13	E-L Byz	bluish color in crevices. Carvings on underside
720	faience	0.85 × 0.60 × 0.50	5GY7/1	F.6:13	E-L Byz	flat underside with tow gashes. Perferation head to tail
1625	faience	1.2 × 0.80 × 0.6	5Y8/2	B.2:94	Ir 2/Per	flat underside with three indistinct carvings
2525	steatite	1.5 × 1.1 × 0.70	-	F.31:8	LB 2/Ir 1	inscription

This find of an Egyptian scarab dating to the New Kingdom period located in a Roman tomb in Transjordan is one more example of the unreliability of scarabs as criteria for dating purposes, a point which cannot be emphasized strongly enough. In an article on the scarabs found at Shechem, I (Horn 1962) have pointed to a similar example as a warning against the frequent use of scarabs to date archaeological contexts. Once more I want to point to a drastic example by Reisner of the unreliability of scarabs for dating purposes. He (Reisner, Fisher, and Lyon 1924: 376, n. 1) found an intrusive communal burial place of the Roman period in the inner part of the pyramid temple of Mycerinus. On the same mummies which came to light there, coins of the first two centuries A.D. were found together with scarabs of Thutmose III.

Object 1625: a Scarab from a Late Iron Age Context on the Mound

Scarab 1625 (fig. 7.1) was found during the 1973 excavation season in Area B, Square 2 in a Late Iron Age context, which also produced a seventh-century B.C. ostracon (Hesban Ostracon V) containing an inscription of four characters (Cross 1975: 18, 19). It is located in the Horn Archaeological Museum (HAM 73.0315). The scarab is made of gray sandstone and measures 12 mm × 8 mm × 6 mm. The shape of the head and clypeus puts it in the range of other scarabs that date from the 18th Dynasty down to the latest periods of ancient Egyptian history. The prothorax and elytra belong to a type that was common from the 13th to the 22nd Dynasties while the sides do not fall easily into any classification (Rowe 1936: pl. XXXII no. 54 and pl. XXXIII no. 61). Hence the scarab can be dated in the first half of the first millennium B.C., a date that fits with the archaeological context in which it was found.

The belly side seems to contain three hieroglyphic characters which are impossible to read with certainty, a fact that may indicate that the scarab is a local imitation of an Egyptian product. The right-hand sign may be a reed leaf, the *i*-sign, and the left-hand sign possibly a sitting individual. The bottom character may be the *nb*-sign, unless it is part of the sitting-figure sign.

Object 720: a Scarab (?) from a Tomb

This scarab (HAM 71.0773, cf. fig. 7.2), was found during the 1971 season of excavations in Tomb F.6. Since only body sherds came from the

Figure 7.1 Object 1625.

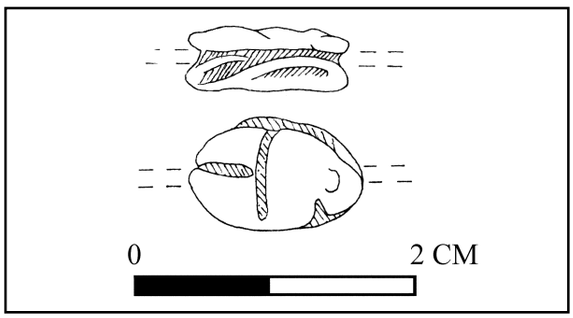
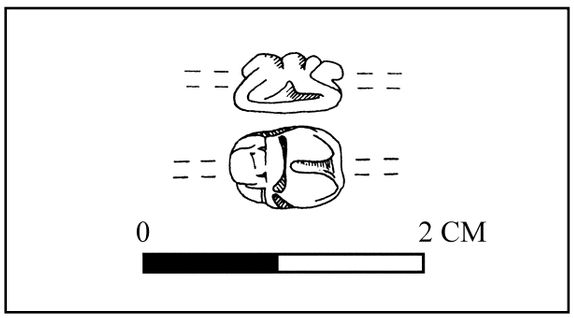


Figure 7.2 Object 720.



context in which it was found, a Byzantine date for the find is uncertain. An Early Roman-period date for the construction of the tomb now seems probable (Waterhouse 1998: 25-26). The scarab is made of faience and measures 8.5 mm × 6 mm × 5 mm. It may be a locally-made imitation of Egyptian scarabs in that the shape of its back and sides cannot be used for dating purposes. Its belly contains three irregularly placed small cupholes, which are possibly of accidental origin.

Object 719: a Scarab (?) from a Tomb

This scarab (pl. 7.2) was found together with Object 720 (above) during the 1971 excavations season in Tomb F.6. Their context seems to point to a Byzantine period date for these objects. Object 719 is now in the Archaeological Museum in Amman. It is made of faience and measures 10 mm × 8.5 mm × 6.5 mm.

Note: Unmarked Scarabs or Beads?
(by Elizabeth E. Platt)

The following objects are discussed as possible beads because they are bead-sized and have no markings on the underside. If scarab-like objects have no markings on the underside they may have been used as beads which were suspended through their perforations.

Object 719 (Dept. of Antiquities) is a weathered faience piece with a beetle-wing case carved on the back and something not readily distinguishable on the underside. In its present state it is very light grey (Munsell N8, "white"), with a "bluish" color in the crevices.

Object 720 measures 0.85 cm across its perforation, which runs lengthwise (from head to tail) through the object. Its back is nicely carved and closely resembles a beetle-wing case. The underside is basically flat, but two gashes may be attempts to make a seal carving. The fabric is faience, now weathered to a 5GY7/1, "(light) greenish-grey." Associated objects include Object 719 (above); Object 717 glass bead; Object 722 carnelian bead; and Object 723, a bead made of agate.

Objects 719 and 720 are similar to Object 618 (HAM 71.0752), which also was found in Tomb F6, but is designated a bead. It measures 0.75 cm across the length of its perforation. Its back has pronounced carving, definitely suggesting the beetle-wing case. However, the underside is flat and blank. It is made of faience, weathered, probably from an original turquoise color to a pale shade (5Y8/1, "white").

Plate 7.2 Object 719.

Object 1344 (Dept. of Antiquities) measures 1.2 x 1.06 x 0.45 in height. Its basic shape and size look quite like Object 720, hence its original disignation as a "scarab." Nevertheless, a closer and magnified observation reveals not a beetle with flat underside but a *face* with well-carved features. A crown and rings at the ear may also be indicated. The brow has a fringe of hair. The flat side of the object could easily be mounted in an earring such as Object 2554. The material is 10YR8/2 ("white") to very pale orange, and probably made of quartz. This was the only object found in locus F.12:2, which like the context of Objects 719 and 720, dates to the Byzantine period.

It would seem that a reasonable case can be made that these four objects functioned as beads. Objects 618 and 720 do not have markings on their underside. The relatively large number of beads that were associated with Objects 719 and 720 strengthen the suggestion that they are beads as well. Object 1344 does not have the shape of a beetle, so it is likely that it is also a bead.

Conclusion

From the above analysis, it would seem that the total number of scarabs that have been found at Hesban is actually only two, i.e., Objects 1625 and 2525.

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Chapter Eight

GLASS FROM HESBAN

Sidney M. Goldstein

Chapter Eight

Glass From Hesban

Introduction

Quantities of glass fragments were found at Hesban during the excavations at the site between 1968 and 1976. Unfortunately, in the first season of excavations, except in cases where complete or nearly complete objects where found, glass was processed collectively as unstratified fragments. During the remaining seasons, a concerted effort was made to carefully record the excavated glass fragments. The following note represents only an initial sorting of this material and is meant merely to give an impression of the types of glass that were found at the site.

The glass material from the first season[1] of excavations consisted of characteristic fragments such as rims, bases, and handles along with quantities of vessel walls, usually without decoration. A small amount of cullet or chunks of non-vessel glass was also excavated. This was curious, as there seems to be no evidence that glass was made at Hesban. The amount of cullet was small, less than a pound of glass, and there were virtually no characteristic droplets or drippings which are associated with hot glass. Nor were there any of the glass-blowing wastes which accumulate around a workshop and are usually remelted periodically along with the cullet.

Preliminary study suggests that glass vessels were used at Hesban beginning in the late Hellenistic period (first century B.C.) through the Ayyubid/Mamluk period (14th century A.D.) and perhaps later. Thus, utilitarian vessels are represented in virtually every major period of habitation. The vessels fall into three time periods (Hellenistic, Roman/Byzantine and Islamic) with virtually ninety-five per-cent of the material belonging to the Roman/Byzantine and Islamic periods. This large group can be equally divided between Roman/Byzantine glass from the late third through the late sixth centuries A.D., and Islamic glass of the eighth through the fourteenth centuries A.D. The balance of material, less than five percent, may be attributed to the late Hellenistic period.

Hellenistic-Period Glass

The Hellenistic period at Hesban is represented by over twenty fragments of typical shallow bowls. They are decorated with interior wheel-cut grooves or exterior molded ribs or both. Bowls were made of colorless, amethyst, light green, green, and amber glass. Vessels of this type have been found at Tel Anafa (Weinberg 1970) as well as in the area around Kibbutz Hagoshrim (Weinberg 1973) in Upper Galilee. Both sites have yielded a large series of subconical bowls with ribs and wheel-cut grooves. It is interesting to note that there is a paucity of first- and second-century B.C. glass among the fragments except for these bowls.

Roman- and Byzantine-Period Glass

The Roman- and Byzantine-period glass is almost entirely utilitarian in nature and there is no indication of window glass. Two tesserae, one made of gold glass and another of blue, imply the existence of wall mosaics. More interesting are two fragments of an ingot (or cake) fashioned in yellow-green glass with a thin layer of gold foil sandwiched between two layers. Such units were scored and broken up into gold glass tesserae. The presence of this material provides interesting documentation for the technique of mosaic gold glass installation at Hesban.

The vessel material indicates a wide range of bottles, cups, bowls, and lamps utilized by the inhabitants. For the most part, vessels were undecorated but there is some limited evidence for mold-blown and applied decorative elements. The report on the 1971 season illustrates a number of complete vessels (pl. 8.1) from Area C.1 (Thompson 1973; pl. 13A) and Tombs F.6 and F.8 (Waterhouse 1973; pl. 13A). Most of these vessels are represented

Plate 8.1 Roman Glass.

among the fragment material with the exception of the "sprinkler" bottle from Tomb F.6. This type of ledge or collar rim and the characteristic constriction at the neck has not been noted.

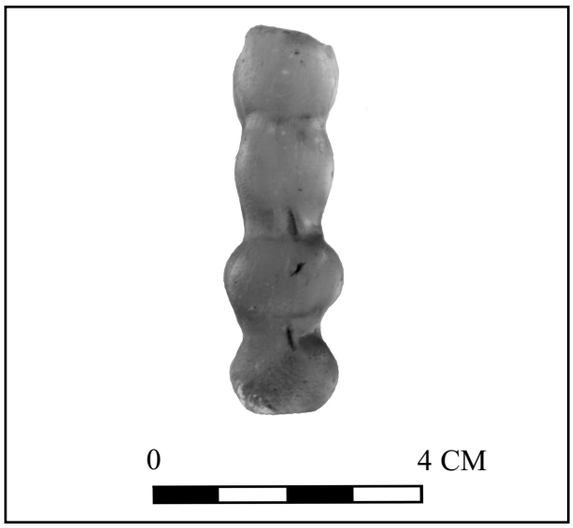
There is no single form which may be selected as a popular or characteristic late Roman/Byzantine-period glass from Hesban. Rather, the fragments indicate only some of the many vessel types preserved. Representative rim forms include large bowls with an out-folded rib and collar rim (late 4th century A.D.); cups with a vertically ribbed handle, applied along the rim; shallow bowls with simple rounded rims (late 3d century A.D.); storage bottles with a rounded rim and wide cylindrical neck (4th century A.D.); and globular bottles with an infolded rim and cylindrical neck (late 3d-4th century A.D.). In terms of bases, there are goblets with a pushed-in base, which were a standard 3d-4th century A.D. form. The thickened-based beaker with pattern-molded ribs is perhaps a slightly earlier form. Unguent bottles with rounded bases are a simple tubular form that can be dated from the late 2nd to 4th centuries A.D.

Small wick tubes probably represent a form which spans from the Byzantine to Islamic period. These wick tubes are found on beaker-shaped lamps with high kicked bases. They in turn developed from 5th to 6th-century A.D. lamps of simple bowl shape with multiple handles and a central thick wick tube (Crowfoot and Harden 1932: 201; pl. 28.7-9). Examples of such vessels at Hesban must postdate the 7th century A.D. and should be grouped with a series of shallow bowl-shaped lamps with long solid beaded stems (pl. 8.2). These types of vessels were also found at Gerasa (Bauer 1938: 519-20, pl. 141, fig. 17). The lamps were usually suspended in groups of three or more from circular bronze polycandelon holders and the solid stem provided anchoring and stabilization for the otherwise top-heavy form.

Islamic-Period Glass

The later glass from Hesban appears to be more evenly distributed between Islamic-period chronological boundaries. Fragments of rims and bottle necks of simple containers produced before the 8th century A.D. are easily associated with eastern Roman products of the late period which have not yet been transformed into the characteristic shapes associated with Islamic forms. A well-preserved bowl of a yellow-green glass should probably be

Plate 8.2 Byzantine Beaker-shaped Lamp base.



dated to the transitional period of the 8-9th centuries A.D. The general shape of the shallow, footed bowl (rim diameter, 19 cm.) has been embellished by pattern-molded vertical ribbing and a deeper green trail of glass applied to the rim. Between the 10th and 12th centuries A.D. the two techniques employed on this bowl were perfected and utilized separately.

There are a number of mold-blown patterns found at Hesban. Ribs are blown vertically, horizontally and in zigzag patterns. The network pattern has many variations in cup, dish, and bottle fragments. Pincer decorated fragments with concentric circles and central bosses are also attested. Small cups and occasional howls and bottles with this decoration can be assigned to the 8-9th centuries A.D.

Trailing on threads of contrasting colors, usually opaque white on amethyst, deep green, or blue backgrounds was a favorite decorative technique of later in the Islamic period. A simple contrasting trail of white applied at the rim of a deep green bowl soon became an elaborate system of zigzags, checkerboards or diamond-shaped dashes on beakers, bottles, and bowls, as documented on a number of fragments (pl. 8.3). Post-10th century A.D. utilitarian vessels such as the characteristic "spearhead" flask, and the flared-rim beaker with applied trail at the foot are also attested.

Plate 8.3 Trail Technique on Islamic Glass.

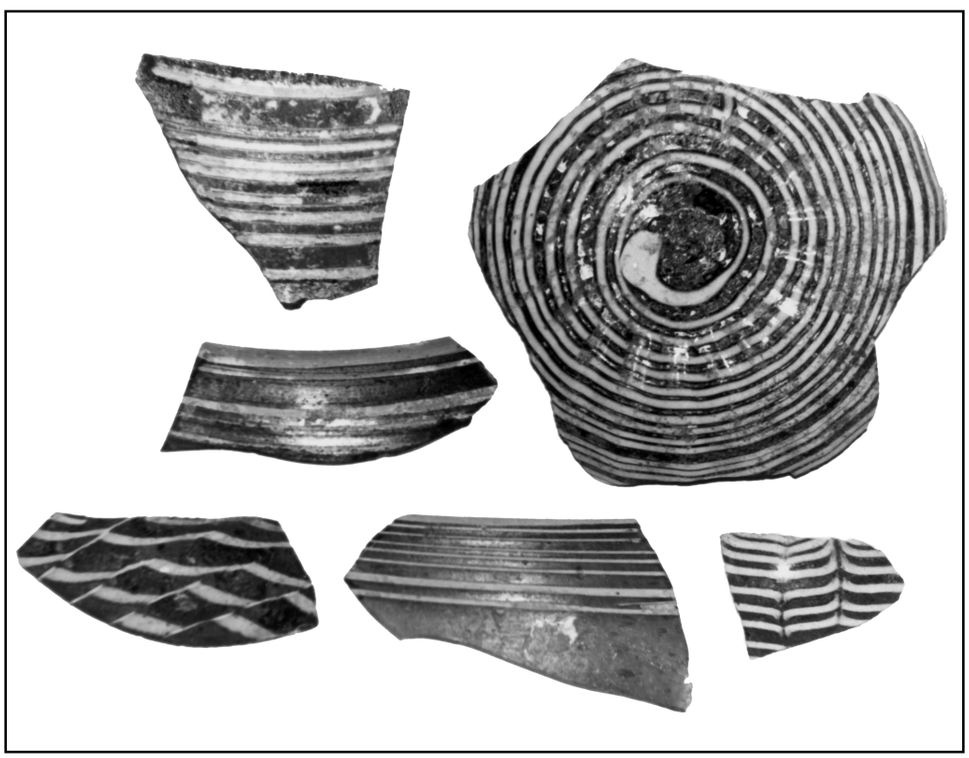
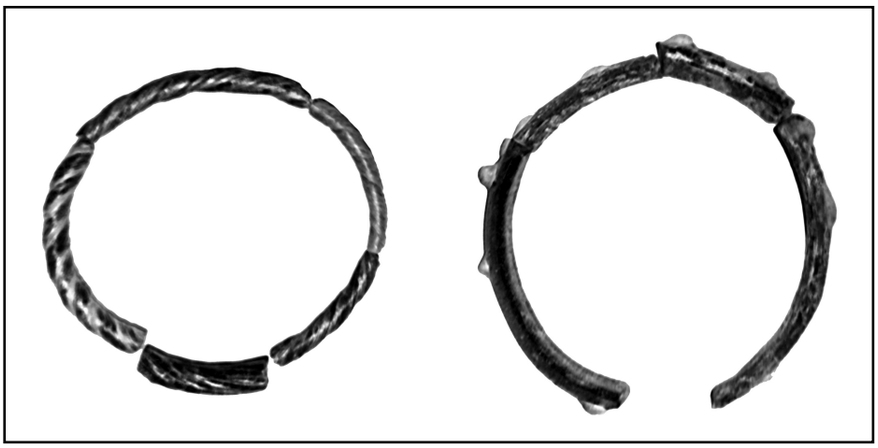


Plate 8.4 Islamic-Period Glass Bangles.



Finally, it should be mentioned that a large number of bangle fragments were excavated. Bangle manufacture at this time utilized spiral twisting and trailing on contrasting colors in order to achieve elaborate surfaces. Plate 8.4 provides a representative sample of the excavated types.

Note

[1]Most of the unstratified glass fragments from the 1968 season were found in Area C. Some material coming from Cistern C.4:7 was kept separate, and a limited amount of glass was recovered from Areas B and D.

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Chapter Nine

OBJECTS OF STONE, CLAY, BONE, AND IVORY FROM TELL HESBAN AND VICINITY

Wade R. Kotter and Paul J. Ray, Jr.

Chapter Nine

Objects of Stone, Clay, Bone and Ivory From Tell Hesban and Vicinity

Introduction

Tell Hesban, a site some 25 kilometers southwest of Amman and traditionally identified with biblical Heshbon and Greco-Roman Esbus, was excavated in five campaigns during the years 1968, 1971, 1973, 1974, and 1976. The excavations have revealed that the site was occupied from Iron Age I to the Ottoman period. During the excavations, numerous objects of stone, clay, bone and ivory were found.[1] The purpose of this report is to catalogue and describe the excavated objects made from these materials which do not fit into categories covered elsewhere in this volume.

CATALOGUE OF OBJECTS

Stone Objects

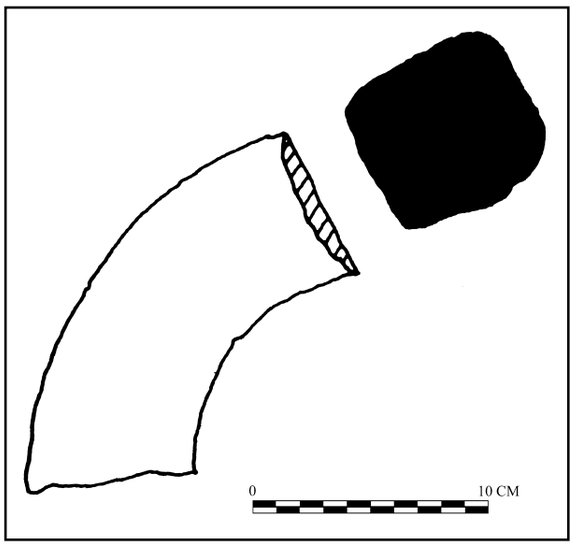
Stone objects found at Hesban during the five seasons of excavation include millstones, mortars, pestles, querns, mullers, rubbing stones, whetstones, door sockets, fragments of stone vessels, slingstones, architectural and sculpture fragments, mace heads, weights, and various unidentified pieces of stone.

Millstones and Millstone Fragments

Numerous whole and fragmentary millstones, used in the type of mill in which a circular upper millstone was rotated around the upper part of a conical lower millstone, were found at Hesban. All of the examples of upper millstones were fragmentary (fig. 9.1), while two of the three lower millstones were complete and the third had a portion broken off from the top. The majority of the upper millstone fragments were made of basalt, as were the three lower millstones. However, three of the upper millstone fragments were formed out of a hard limestone. The three limestone fragments came from earlier contexts than those made from basalt, and one might suggest a shift in the material used, though the examples are too few to be definitive. The Hellenistic context of Object 1667, an upper millstone fragment made of limestone, may indicate the time of the introduction of this type of mill at Hesban, while the appearance of millstone fragments in most of the later strata seems to indicate that this type was used throughout the later periods of occupation.

No. 64; B.1:2 Strata 1-2: Basalt, fragment of an upper millstone.
No. 96; D.2:4 Strata 2-3: Basalt, fragment of an upper millstone.
No. 212; C.4:1 Stratum 2: Basalt, fragment of an upper millstone.
No. 269; C.1:6 Stratum 3: Basalt, fragment of an upper millstone.
No. 1366; D.6:63B Stratum 7: Basalt, fragment of an upper millstone.
No. 1426; C.2:24 Strata 9-10: Limestone, fragment of a small upper millstone.
No. 1489; A.6:59 Stratum 8 (fig. 9.1): Limestone, fragment of an upper millstone.
No. 1667; B.4:175 Stratum 15: Limestone, half of an upper millstone.
No. 2079; A.9:87 Stratum 6: Basalt, fragment of an upper millstone.
No. 2081; A.9:87 Stratum 6: Basalt, fragment of an upper millstone.
No. 2201; C.8:Surface: Basalt, complete conical lower millstone.
No. 2375; C.6:29 Stratum 3: Basalt, small conical lower millstone.
No. 2628; F.37:1: Basalt, conical lower millstone with the top broken.
No. 2944: G.15:27: Basalt, fragment of an upper millstone.

Figure 9.1 Millstone Fragment (Object 1489).



Mortars and Mortar Fragments

Two main types of mortars were found at Hesban. The first type is a piece of limestone with a depression in the center. The limestone used to make these mortars ranges from a very soft, chalky variety to one which is very hard. These mortars were either well-shaped or rough pieces of limestone with little evidence of any intentional shaping (fig. 9.2). Examples of this type of mortar were found in loci stretching from Iron Age I to the latest Islamic-period phases.

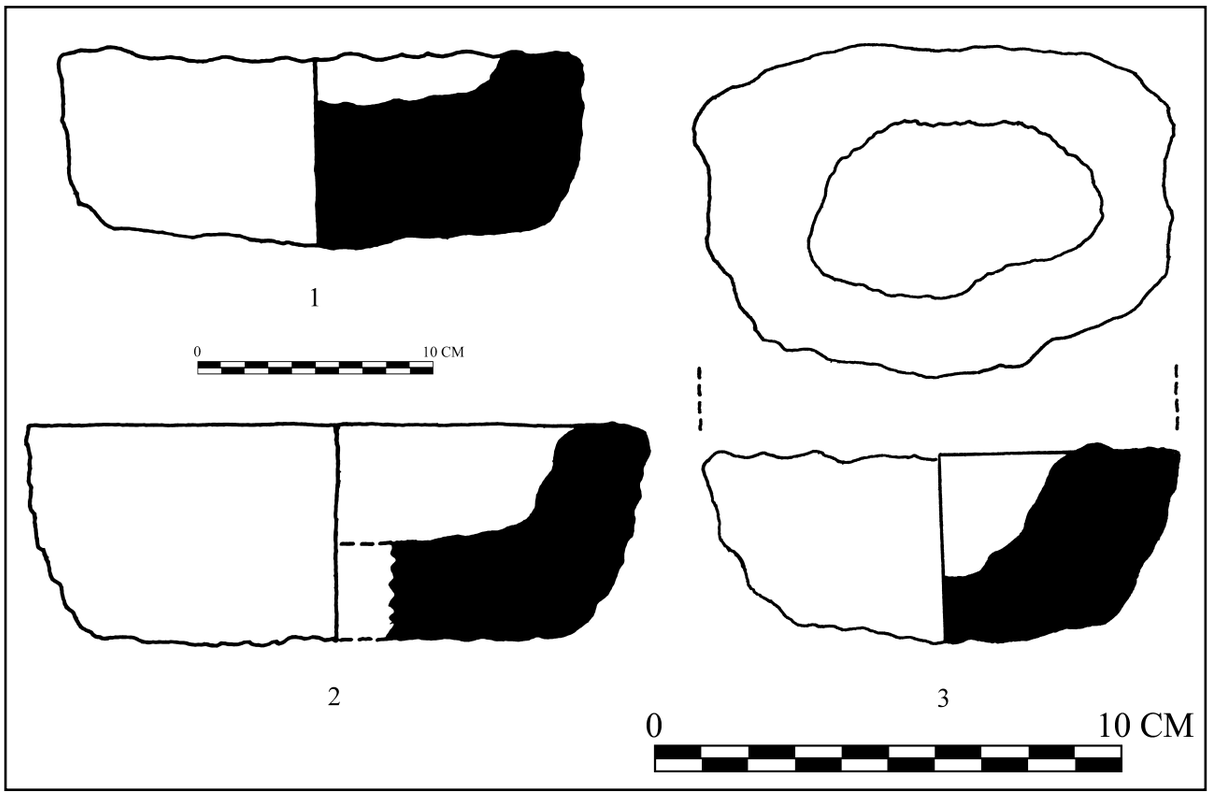
The second type of mortar found at Hesban is a shallow bowl standing on three roughly cylindrical legs. The two examples of this type, both made of basalt, were found in a soil layer at the entrance of a Roman tomb (Locus F.6:4). These two mortars were complete, although both had been broken. Fragments of similar vessels were found, but because of the difficulties encountered in assigning these various fragments to certain types, they will be discussed in the section on stone vessel fragments. Essentially identical mortars have been found at other sites on both sides of the Jordan River in contexts ranging from the Middle Bronze Age to the Late Islamic period. It would seem evident that there is little hope for a typology of basal tripod mortars which would give us a series for dating purposes. The possible reasons for this are varied. First of all, stone vessels were difficult to make and took a great deal of time to manufacture. Therefore, there was little room for the minute variations which can be found in pottery and various other kinds of artifacts. The use-life of these objects was also longer than for pottery, indicating that fewer were made. This, however, does not rule out the fact that certain types of stone vessels might be indicative of specific time periods, as will be seen when the other types of stone vessels are discussed.

No. 190; A.2:11 Stratum 3: Limestone, half of a mortar.
No. 310; B.1:44 Strata 15/16: Limestone, a roughly-shaped mortar.
No. 633; F.6:4: Basalt, a small, well-made tripod mortar.
No. 634; F.6:4: Basalt, a well-made tripod mortar.
No. 1216a; B.2:35A Stratum 13 (fig. 9.2:1): Limestone, mortar.
No. 1312; C.3:12 Cleanup (fig. 9.2:2): Limestone, fragment of a well-made mortar.
No. 1358; B.3:58 Stratum 14 (fig. 9.2:3): Limestone, crude mortar.
No. 1594a; C.1:96 Stratum 14 (?): Limestone, a well-made mortar.
No. 1706; D.1:65 Cleanup: Limestone, a roughly-shaped mortar.
No. 1707; D.4:40F Balk Removal: Limestone, half of a well-made mortar.
No. 1708; B.3:93 Stratum 20: Limestone, small and roughly-shaped mortar.
No. 1858; A.5:62D Stratum 14: Limestone, roughly-shaped mortar.
No. 1904; A:8:1 Strata 1-3: Limestone, fragment of roughly-shaped mortar.
No. 1972; B.4:228 Stratum 14: Limestone, large portion of a well-made mortar.
No. 1994; D.3:69 Cleanup: Limestone, half of a mortar.
No. 2271; D.3:16 Strata 11-12: Limestone, large portion of a mortar.
No. 2323: G.9:1: Limestone, complete mortar with one corner squared.

Pestles and Pestle Fragments

Numerous pestles of different shapes and sizes were found at Hesban (figs. 9.3 and 9.4). They were made of either basalt or limestone, and most of them show evidence of use on the pounding surface. The various contexts from which the pestles came would seem to indicate that similar objects were used to pound and grind diverse materials

Figure 9.2 Mortars.



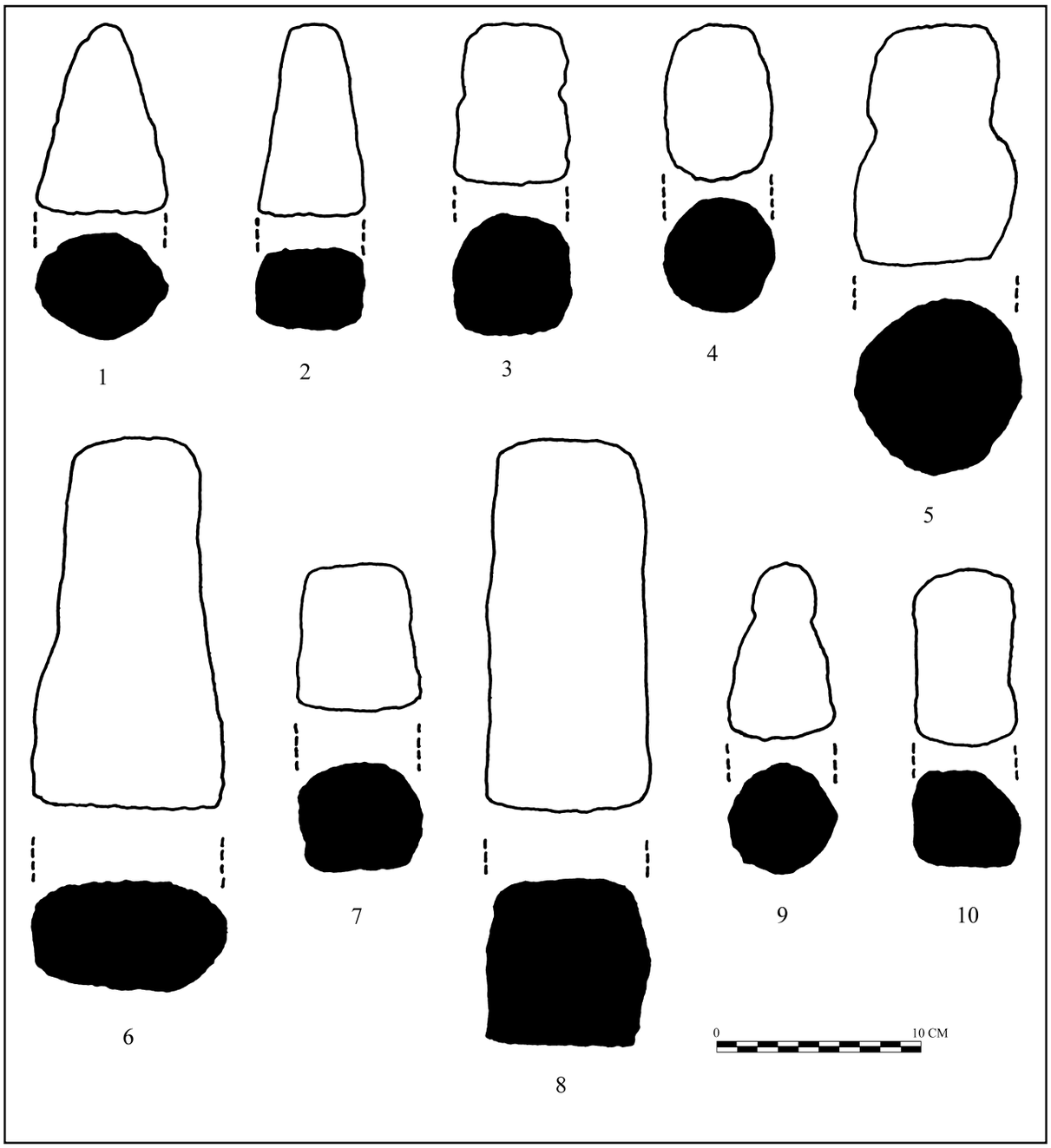
throughout the varied stages of occupation at Hesban. Unfortunately, none of the types found seem to be indicative of a particular time period.

No. 66; A.1:5 Stratum 2 (fig. 9.3:1): Basalt; bottom surface shows use.
No. 228; C.3:4 Stratum 3 (fig. 9.3:2): Limestone.
No. 353; A.1:29 Stratum 14 (fig. 9.3:3): Limestone.
No. 799; D.6:15 Stratum 3 (fig. 9.3:4): Basalt.
No. 1137; C.1:65 Stratum 2 (fig. 9.3:5): Basalt.
No. 1216b; B.2:35A Stratum 13 (fig. 9.3:6): Limestone.
No. 1219; B.4:58 Stratum 13 (fig. 9.3:7): Limestone; bottom surface shows use.
No. 1594b; C.1:96 Stratum 14 (?) (fig. 9.3:8): Limestone.
No. 1781; C.5:59 Stratum 13 (fig. 9.3:9): Limestone, well-used.
No. 1873; D.2:74 Strata 14-15 (fig. 9.3:10): Basalt.
No. 1882; C.5:68 Stratum 6 (fig. 9.4:1): Limestone.
No. 1897; C.7:30 Stratum 3 (fig. 9.4:2): Basalt.
No. 1965; D.2:77B Stratum 15 (fig. 9.4:3): Basalt.
No. 1968; B.4:222 Stratum 14: Basalt, a small cylinder; shows extensive use.
No. 2369; C.5:92 Stratum 10 (fig. 9.4:4): Basalt.
No. 2410; B.7:24 Stratum 10: Basalt, small portion of a cylindrical pestle.
No. 2444; D.4:99 Stratum 13: Hematite.
No. 2608; A.10:4 Strata 1-2: Basalt, end portion of a large cylindrical pestle; shows a great deal of use.
No. 2947; C.8:8 Stratum 3: Limestone, a large cylindrical pestle.

Querns and Quern Fragments

Several querns and quern fragments, all made of basalt, were found at Hesban. Two complete saddle querns, along with numerous fragments, make up the majority of the objects in this category. They are in every aspect similar to saddle querns found at other sites in Transjordan and Palestine. They were apparently used to grind grain, as are their modern counterparts. However, one interesting fragment (fig. 9.5) belongs to a rectangular

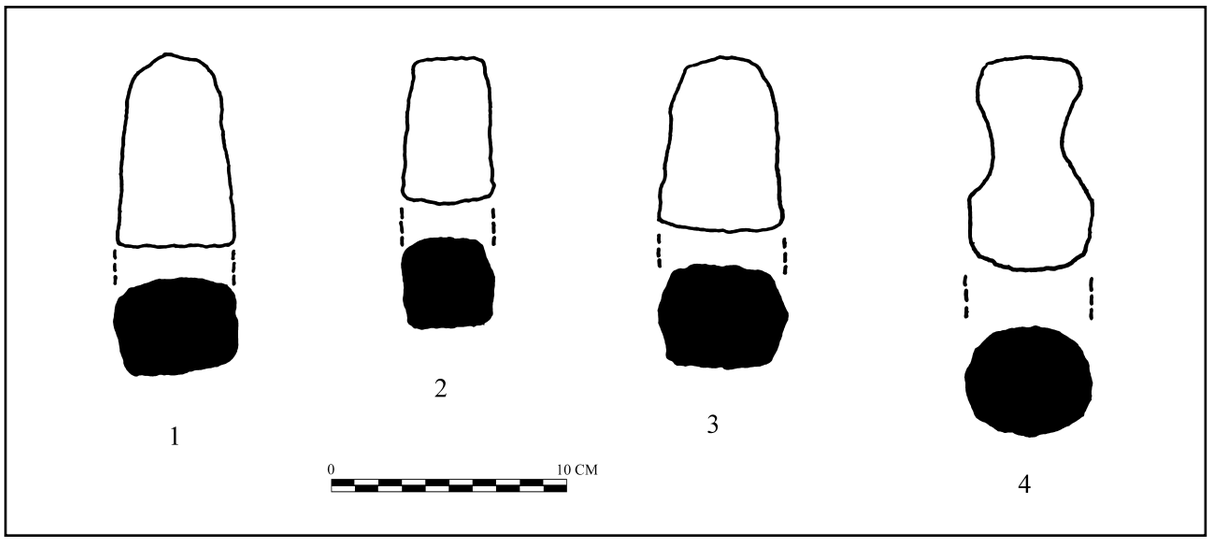
Figure 9.3 Pestles.



quern, of which no parallel has so far been found. These quern fragments were used in conjunction with the mullers (see below). These objects come from various strata and testify to the use of querns throughout the occupation of the tell, although no specific type can be considered typical of any one time period.

No. 36; C.1:1 Stratum 2: Basalt, center potion of a saddle quern.

Figure 9.4 Pestles.



No. 146; D.1:14 Stratum 3: Basalt, large portion of a saddle quern.
No. 274; C.3:6 Stratum 3: Basalt, a complete saddle quern.
No. 392; D.6:5 Stratum 3: Stone, small fragment possibly from the center of a saddle quern.
No. 766; A.5:4 Stratum 3: Basalt, large portion of a saddle quern.
No. 1130; B.4:59 Stratum 13 (fig. 9.5): Basalt, end of a very well-made rectangular quern.
No. 1309; D.6:57 Stratum 7: Basalt, small portion of a saddle quern.
No. 1333; C.2:9: Basalt, small portion of a quern.
No. 1433; B.4:130 Stratum 13: Basalt, a complete saddle quern.
No. 2943; D.4:110 Stratum 14: Basalt, large portion of a quern.
No. 2946; C.8:34 Stratum 3: Basalt, corner of a large quern.

Mullers and Muller Fragments

A muller is a stone used in the hand to grind grain on querns. Two types of mullers were in use at Hesban. The first type (fig. 9.6:1) is a large stone, flat on one side and convex on the other. The second type is shaped much like a rectangular block with the corners rounded (fig. 9.6:2). The majority of mullers found at Hesban were made of basalt, as was the case with the querns. However, two limestone and one sandstone example were found, indicating that the material used was not exclusively of one type. These objects were also found in various contexts, and again bear wit-

Figure 9.5 Quern Fragment (Object 1130).

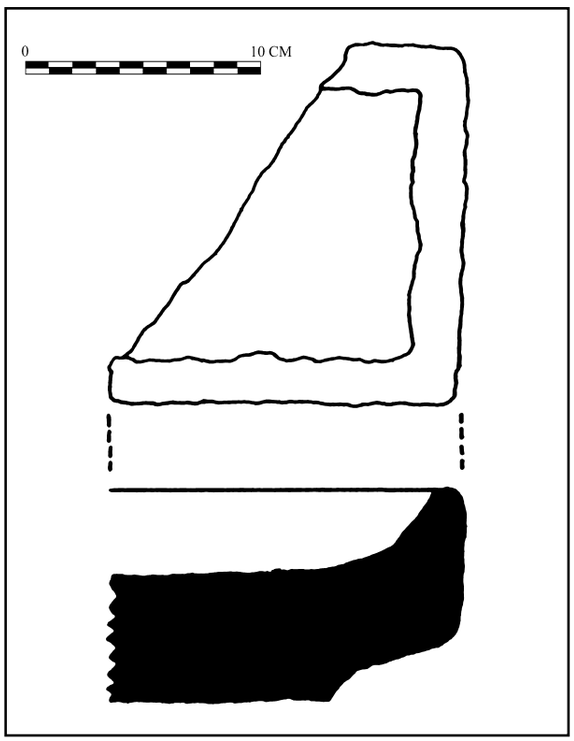
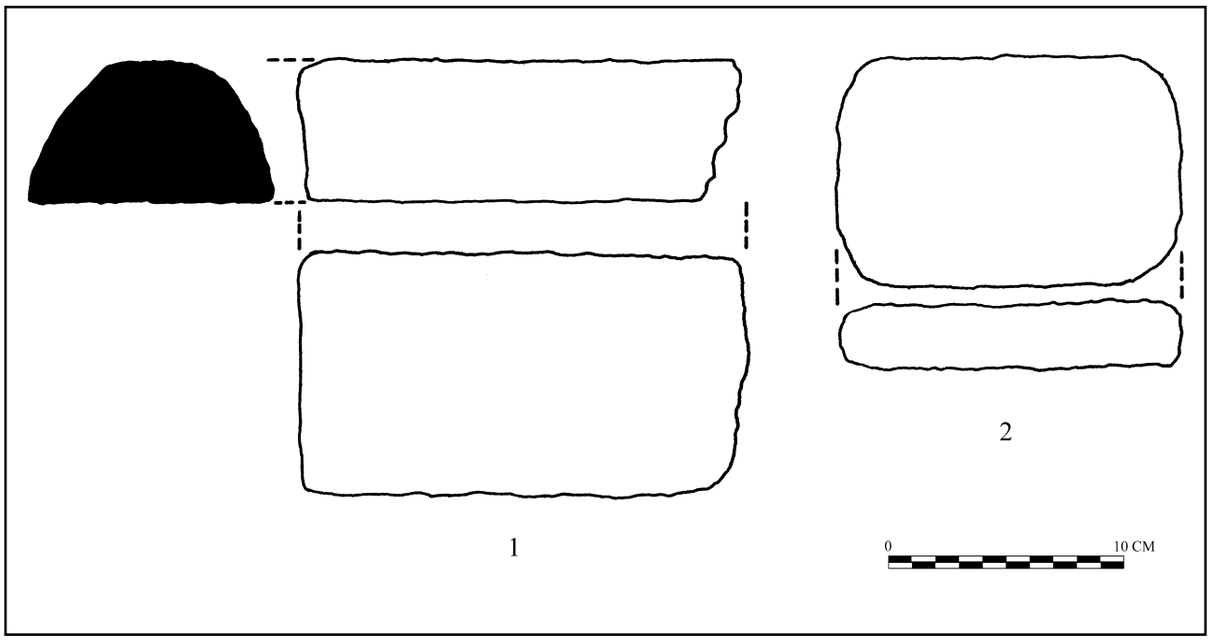


Figure 9.6 Mullers.



ness to the use of such objects throughout the occupation of the site.

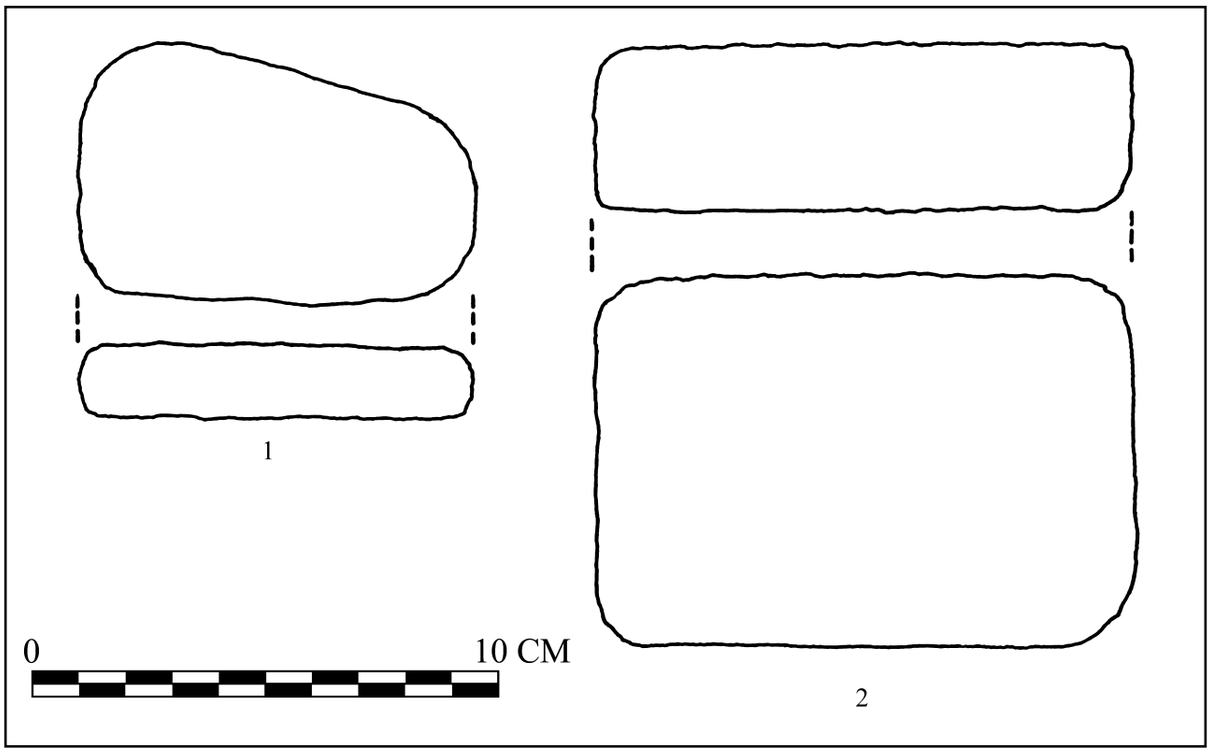
No. 351; A.2:Surface: Stone.
N0. 369; D.5:1 Strata 7-8: Basalt, corner of a large muller.
No. 657; C.4:19 Stratum 3: Basalt, end of a large muller.
No. 979; C.4:41 Stratum 6: Stone, major portion of a large muller.
No. 981; C.5:5 Stratum 3: Basalt, corner of a rectangular muller.
No. 1434; C.2:24 Strata 9-10 (fig. 9.6:1): Basalt, large muller with one end broken.
No. 1435; C.2:24 Strata 9-10: Basalt, small fragment of a rectangular muller.
No. 1543; C.1:45 Stratum 15 (fig. 9.6:2): Limestone, well-used rectangular muller.
No. 2322; B.7:19 Stratum 9: Basalt, half of a large rectangular muller.
No. 2324; G.11:Balk Trim: Basalt, half of a large rectangular muller.
No. 2397; A.11:36 Stratum 5: Basalt, large portion of a large rectangular muller.
No. 2398; A.11:35 Stratum 3: Sandstone, an irregularly-shaped muller.
No. 2569; D.4:107 Stratum 14: Basalt, half of a large rectangular muller.
No. 2570; D.4:107 Stratum 14: Basalt, half of a loaf-shaped muller.
No. 2596; C.1:132 Stratum 18: Limestone, corner of a loaf-shaped muller.
No. 2746; C.5:181 Stratum 6: Basalt, end of a large rectangular muller.
No. 2945; A.4:118A Stratum 14: Basalt, large loaf-shaped muller with one end broken.

Rubbing Stones

A large number of small, intentionally shaped stones appear to have been used as rubbing or polishing stones. This is indicated by the polish found on them. Once again, most of them were made of basalt and these artifacts may be separated into the following categories based on their shape. The first type is a small, rectangular block-shaped stone (fig. 9.8:2). The second type is triangular in cross section (fig. 9.8:1), and the third type is a thick, disc-shaped stone (fig. 9.8:4).

Two other types of material were used for rubbing stones. Limestone was represented by three examples, a small block-shaped stone (fig. 9.7:1), half of a small round stone, and an oval shaped stone. All of the limestone objects were highly polished from extensive use. Finally, three rubbing stones were made of pumice. All three were rectan-

Figure 9.7 Rubbing Stones.

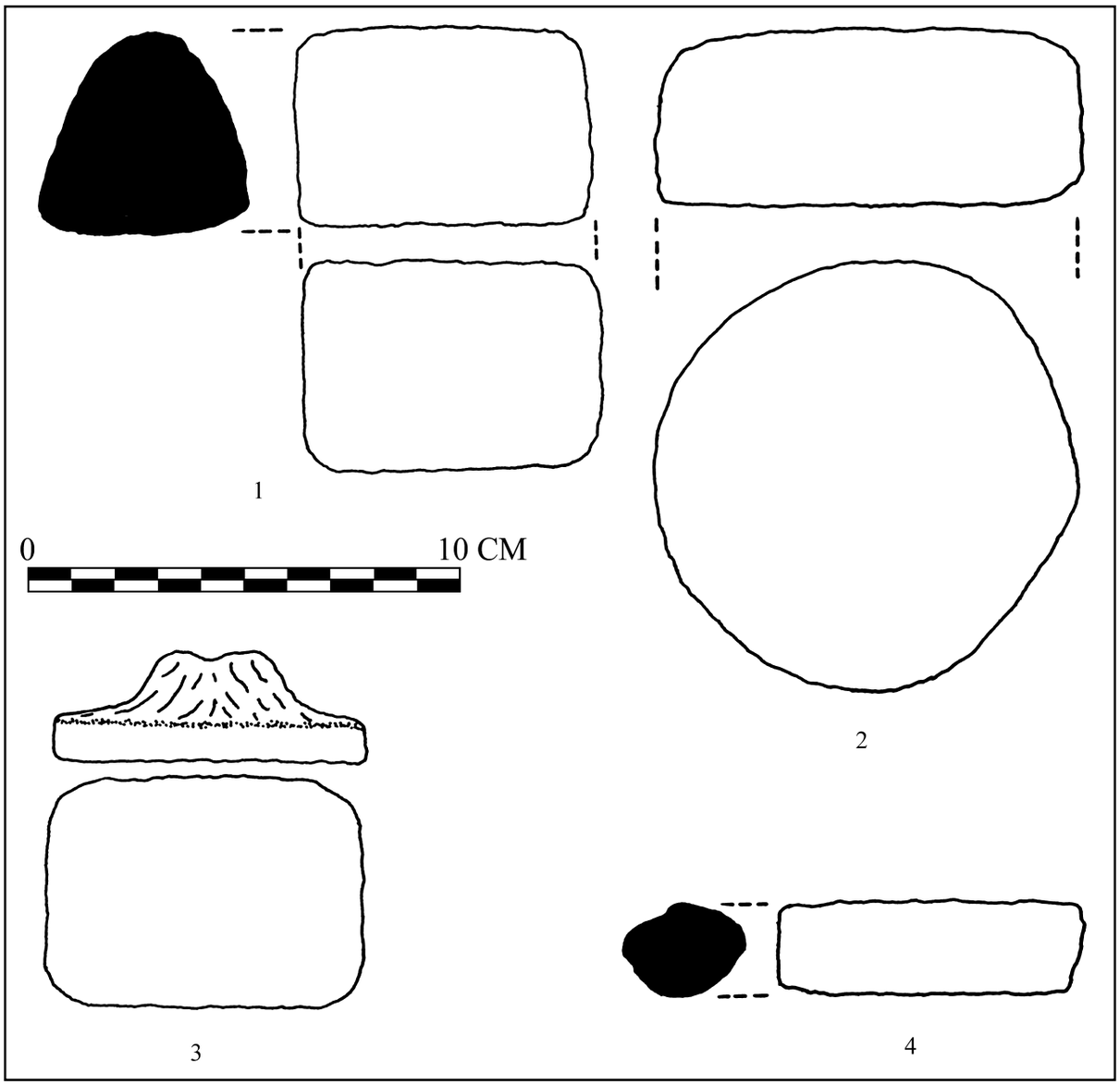


gular in shape, the smallest having what appears to be a handle on the top (fig. 9.8:3), and the larger showing a great deal of use (fig. 9.7:2).

The rubbing stones were found in various contexts, and therefore appear to have been used extensively throughout the history of the site.

No. 234; A.1:2 Stratum 2: Stone.
No. 244; C.3:5 Stratum 4: Limestone, half of a small rectangular rubbing stone.
No. 663; D.5:6 Stratum 2: Basalt, fragment of a small rubbing stone.
No. 804; B.1:91 Strata 15/16 (fig. 9.7:1): Limestone, rubbing stone, polished from extensive use.
No. 900; D.5:5E Stratum 3 (fig. 9.7:2): Pumice, complete rectangular rubbing stone.
No. 1129; B.4:59 Stratum 13: Basalt, small round rubbing stone.
No. 1253; B.2:27 Stratum 11: Pumice, end of a oval-shaped rubbing stone.
No. 1316; D.3:21 Stratum 9: Basalt, small cone-shaped rubbing stone.
No. 1317; B.2:72 Stratum 15: Basalt, small rubbing stone broken on one side.
No. 1319; B.2:73 Stratum 15: Basalt, small oval-shaped rubbing stone polished from extensive use.
No. 1388; B.3:11 Stratum 4 (fig. 9.8:1): Basalt, small stone with a triangular cross-section.
No. 1636; B.4:127 Stratum 14: Basalt, cubical stone with signs of use from rubbing or polishing.
No. 1674; C.2:51 Stratum 16: Basalt, circular stone.
No. 1777; B.7:9 Stratum 2 (fig. 9.8:2): Basalt, small rectangular stone, possibly used for polishing.
No. 1816; A.9:28 Stratum 3: Pumice, half of a rectangular rubbing stone.
No. 1943; C.6:15 Stratum 3: Basalt, small oval-shaped rubbing stone; shows extensive use.
No. 2029; A.9:72 Stratum 3: Basalt, circular stone with signs of use.
No. 2093; B.4:263 Stratum 14: Limestone, circular stone polished from extensive use.
No. 2312; C.5:93 Stratum 4 (fig. 9.8:3): Pumice, rectangular stone with knobs.
No. 2442; C.6:2 Stratum 4 (fig. 9.8:4): Basalt, circular stone with signs of use.

Figure 9.8 Rubbing Stones.



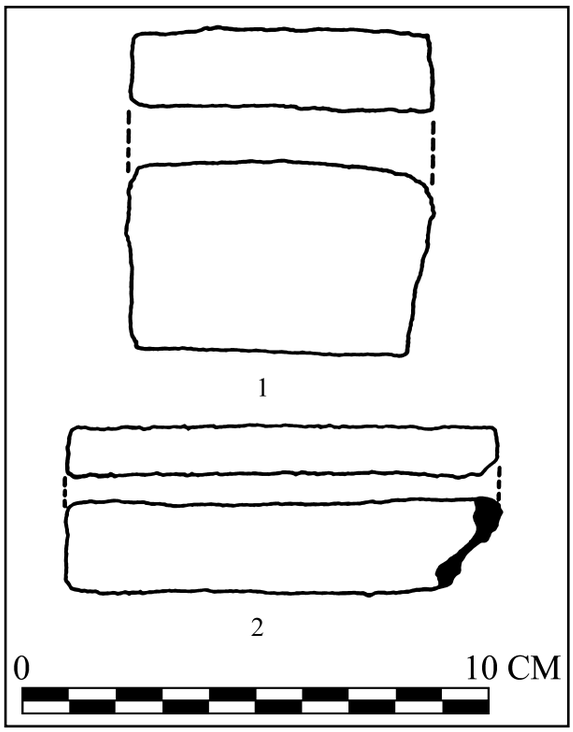
No. 2627; C.7:67 Stratum 10: Basalt, circular stone.
No. 2859; C.6:88 Stratum 4: Limestone, oval stone polished from use.

Whetstones and Whetstone Fragments

A few objects of what appear to be whetstones, or fragments of whetstones, were found at Hesban. All except one were made of soapstone. The majority were rather long and narrowly rectangular in shape (fig. 9.9:2). One example (Object 1194), has a hole in one end, apparently for suspension. Another possible whetstone fragment is a rectangular piece of highly-polished limestone (fig. 9.9:1). The majority of the soapstone examples date to the Islamic period.

No. 525; B.2:1 Stratum 2: Soapstone, small fragment of a rectangular stone.
No. 566; B.1:75 Strata 15/16 (fig.9.9:1): Lime-

Figure 9.9 Whetstones.



stone, fragment of a flat, polished, rectangular stone.
No. 774; B.4:6 Stratum 2: Soapstone, small fragment of a rectangular stone.
No. 877; B.1:97 Strata 15/16: Soapstone, end of a rectangular stone.
No. 1133; C.4:71 Stratum 3: Soapstone, large fragment of a rectangular stone.
No. 1194; D.6:33H Stratum 4: Soapstone, rectangular stone with a hole in one end.
No. 1818; G.6:13 Stratum 2 (fig. 9.9:2): Soapstone, rectangular stone with a broken corner.
No. 2090; C.8:12 Stratum 2: Soapstone, large portion of a rectangular stone.

Door Sockets and Door Socket Fragments

Several pieces of stone with shallow depressions in their upper surface were found in contexts that seem to suggest their identification as door sockets, i.e., the place upon which the post of a door would pivot. Two examples (Objects 2325 and 2326), were found *in situ* in the threshold of a doorway. The majority of these objects were made of limestone, with only one being made of basalt. They date from various periods, but the ones found *in situ* (Objects 2325, 2326, and 2376), were from Mamluk period contexts.

No. 65; B.1:4 Stratum 9: Limestone, one fourth of a socket.
No. 67; A.1:2 Stratum 2: Limestone, one half of a socket.
No. 145; D.2:4 Strata 2-3: Basalt, a complete door socket.
No. 182; A.2:15 Stratum 8; Limestone, one fourth of a socket.
No. 270; C.4:1 Stratum 2: Limestone, one half of a squared socket.
No. 323; C.4:7 Stratum 3: Limestone, one half of a squared socket.
No. 1367; B.4:34 Stratum 9: Limestone, one half of a large socket.
No. 1406; B.3:62 Stratum 15: Limestone, door socket found in situ.
No. 2325; C.6:28 Stratum 3: Limestone, door socket found in situ.
No. 2326; C.6:28 Stratum 3: Limestone, door socket found in situ.
No. 2376; C.6:37 Stratum 3: Limestone, small portion of a rounded socket.
No. 2445; C.1:124 Stratum 18: Limestone, small portion of rounded socket.
No. 2948; D.4:142 Stratum 20: Limestone, door socket.
No. 2949; C.6:88 Stratum 3: Limestone, one half of a squared socket.
No. 2950; C.9:36 Stratum 3: Limestone, rounded socket.

Stone Vessel Fragments

The stone vessel fragments found during the excavations at Hesban may be divided into the following groups, according to the type of stone from which they were made.

Schist

Eight fragments of vessels made from schist were found at Hesban (figs. 9.10-12). These vessels are very similar to those of similar material found by Saller (1941: 301; fig. 34.1-8) at Mt. Nebo, which he dated to the Late Byzantine or Early Islamic period (Saller 1941: 300). The similarity extends even to the circular decoration on the leg of a tripod vessel (fig. 9.12:6) from Hesban (cf. Saller

1941: pl. 133.1), which date to the Umayyad period (Stratum 6). The other Hesban vessels that were made of this material date to the Mamluk period (Strata 2-3), which suggests the continuance of this type of vessel throughout much of the Islamic period.

Limestone

Two main categories of limestone vessels were found at Hesban. The first consisted of fragments of vessels known as "measuring cups" and the second were fragments of small, shallow bowls.

Thirteen fragments of "measuring cups" were found at Hesban. They include fragments of rims (figs. 9.10:4; 9.11:1, 3, 10), handles (figs. 9.11:9; 9.12:3), and a spout (fig. 9.10:5), and several body fragments (fig. 9.12:4). Examples of similar vessels have been found at numerous sites in Palestine, including Bethany (Saller 1957: 99, fig. 3.12 and pl. 6b.99), and Masada (Yadin 1965: pl. 24.1). The finds at Masada are especially important for the dating of this vessel type in that they were found in the casemates of the wall in which the Zealots dwelt during the siege, and therefore can be dated quite confidently to between A.D. 70 and 73 (Yadin 1965: 95). Examples from other sites also fall into this general time period. It is therefore safe to conclude that these "measuring cups" should be dated to the Early Roman period. The Hesban examples all came from loci dated to this time period as well. The function of these vessels remains enigmatic, although the domestic context of the known examples does lend support to some sort of household use.

The other main type of limestone vessel fragments were portions of shallow bowls, three of which were shallow bowls with incised lines on the outside and a sharp carination near the base (figs. 9.11:8, 12 and 9.12:2). All of these vessels came from loci dated to the Roman period. No close parallels have been found.

Rounding out the limestone vessel fragments are a few pyramid-shaped legs, and a portion of a shallow bowl or platter with one leg still attached (fig. 9.11:4).

Alabaster

Fragments of four alabaster vessels were found at Hesban. One of these (fig. 9.10:10) is a shallow bowl with a very thick rim. Similar vessels have been found at Samaria (Reisner, Fisher, and Lyon 1924: 334, fig. 206.7d; Crowfoot, Crowfoot, and Kenyon 1957: 468, fig. 119.5). Another shallow bowl, this one badly worn and encrusted (fig. 9.10:12), was found on the lid of a sarcophagus in a Roman period tomb (Locus F.10:8). A tripod shallow bowl was found in another Roman period tomb (Locus F.31:8). Its rim is indented in a wave-like pattern. A Hellenistic period (Stratum 15) miniature cup (fig. 9.10:11) was also found.

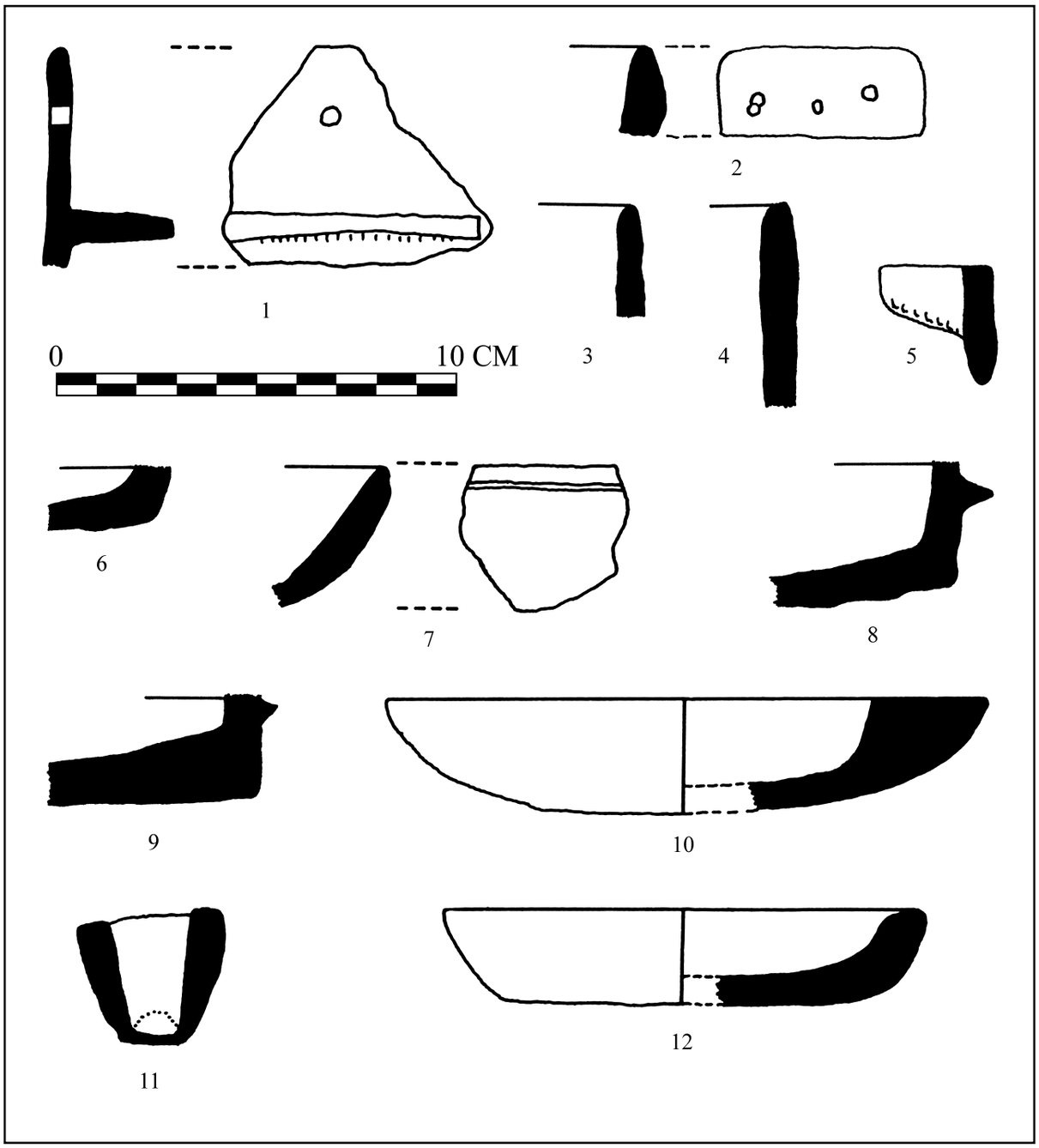
Basalt

Basalt vessel fragments make up by far the greatest number of stone vessel fragments from Hesban. They can be divided into three categories. These include numerous shallow bowl fragments (figs. 9.11:5, 11 and 9.12:1, 5), some fragments of tripod bowls or mortars (fig. 9.12:7), and several fragments of ring-base bowls (figs. 9.11:6 and 9.12:8). The remainder are rims and body fragments which could belong to any of the above bowl types. These vessels were probably used for two purposes. First, many of them could have served as mortars. They may have also served as serving dishes or vessels in which food was prepared. The only possible way to determine the function of such vessels is to find materials within them or adhering to them when they are excavated. Unfortunately, none of these examples yielded such information. These vessel fragments came from various strata, indicating their use during much of the span of occupation of the tell.

No. 35; A.1:1 Stratum 1 (fig. 9.10:1): Schist, ledge handle and a small portion of a rim of a small vessel, with a hole.
No. 75; C.1:4 Stratum 3: Schist, part of base of a small platter-like vessel.
No. 149; B.1:15A Stratum 13: Basalt, rim of a small bowl.
No. 216; D.1:14 Stratum 3: Limestone, rim of a small bowl.
No. 217; C.2:6 Stratum 3 (fig. 9.10:2): Schist, rim with several holes.
No. 233; A.2:5 Stratum 3: Basalt, large portion of a shallow bowl.
No. 246; C.1:6 Stratum 3: Basalt, portion of a bowl.
No. 271; C.4:5 Stratum 2: Basalt, corner of a square basin.
No. 272; D.2:15 Stratum 3: Basalt, rim of a shallow bowl.

No. 300; B.1:32 Strata 15/16: Basalt, rim of a bowl.
No. 307; C.1:6 Stratum 3 (fig. 9.10:3): Schist, rim.
No. 332a; D.2:10 Stratum 3 (fig. 9.10:4): Limestone, rim of a measuring cup.
No. 333a; D.3:13 Stratum 13 (fig. 9.10:5): Limestone, spout of a measuring cup.
No. 334a; D.3:14 Stratum 2 (fig. 9.10:6): Schist, base of a small vessel.
No. 411; A.4:27 Stratum 11 (fig. 9.10:7): Limestone, rim of a small bowl.
No. 432; B.2:5 Stratum 8: Stone.
No. 560; C.5:1 Stratum 2 (fig. 9.10:8): Schist, base and side of vessel with a ledge handle.
No. 572; C.4:35: Limestone.
No. 601; B.3:3 Stratum 9: Basalt, handle of a small vessel.
No. 765; A.5:4 Stratum 3: Basalt, fragment of a large bowl.
No. 785; C.5:3 Stratum 3 (fig. 9.10:9): Schist, base of a small vessel with ledge handle.
No. 791; D.5:6 Stratum 2 (fig. 9.10:10): Alabaster, rim of a small shallow bowl.
No. 806; B.1:91 Strata 15/16 (fig. 9.10:11): Alabaster, half of a very small cup.
No. 814; B.1:92 Strata 15/16: Stone, rim.
No. 870; F.10:8 (fig. 9.10:12): Alabaster, badly encrusted bowl fragment.
No. 880; C.1:45 Stratum 14 (fig. 9.11:1): Limestone, rim of a measuring cup.
No. 1049; C.6:1 Stratum 2: Basalt, fragment of a bowl.
No. 1105; B.4:48 Stratum 13: Limestone, body fragment of a measuring cup.
No. 1313; B.2:72 Strata 15/16: Basalt, portion of a large bowl, with one leg extant.
No. 1327; C.2:9 (fig. 9.11:2): Schist, rim with incised decoration.
No. 1353; A.6:44 Stratum 9: Stone, base of a cup.
No. 1405; B.4:118 Stratum 14: Basalt, rim fragment from a large bowl.
No. 1410; C.1:94 Stratum 14 (fig. 9.11:3): Limestone, rim of a measuring cup.
No. 1428; C.2:24 Strata 9-10 (fig. 9:11:4): Limestone, rim and leg of a large bowl.
No. 1429; C.2:24 Strata 9-10: Limestone, pyramid-shaped leg.
No. 1430; C.2:24 Strata 9-10: Limestone, pyramid-shaped leg.
No. 1488; C.1:41 Stratum 15: Basalt, small portion of a large bowl with legs
No. 1634; D.3:52 Stratum 13 (fig. 9.11:5): Basalt, half of a small, well-made bowl.
No. 1637; C.2:40 Stratum 15: Limestone, large portion of a bowl with a large well-shaped handle.
No. 1683; B.4:186 Stratum 14 (fig. 9.11:6): Basalt, half of well-made bowl.
No. 1724; D.3:64 Cleanup (fig. 9.11:7): Limestone, rim of a small bowl.
No. 1725; D.3:57A Stratum 14: Limestone, body and ledge handle of a cup.
No. 1732; D.1:72 Stratum 7: Basalt, rim and leg of a large bowl.
No. 1749; D.3:57B Stratum 14 (fig. 9.11:8): Limestone, rim of a shallow bowl.
No. 1785; D.2:47 Cleanup (fig. 9.11:9): Limestone, handle fragment from a measuring cup.
No. 1790; D.3:57D Stratum 14 (fig. 9.11:10): Limestone, rim of a measuring cup.
No. 1857; A.5:62B Stratum 14 (fi. 9.11:11): Basalt, rim of a large bowl.
No. 1877; D.2:73 Stratum 12: Alabaster, small body fragment.
No. 1885; D.3:82 Stratum 12 (fig. 9.11:12): Limestone, rim of a shallow bowl.
No. 1903; D.3:86 Stratum 14 (fig. 9.12:1): Limestone, rim of a large bowl.
No. 1962; D.3:97A Stratum 14: Basalt, large portion of a bowl with one leg extant.
No. 1964; D.3:91 Stratum 13 (fig. 9.12:2): Limestone, large portion of a shallow bowl.
No. 1971; D.3:91 Stratum 13 (fig. 9.12:3): Limestone, part of a handle of a measuring cup.
No. 2089; C.7:39 Stratum 3: Basalt, cylindrical foot of a bowl.
No. 2103; B.4:205 Strata 15/16 (fig.9.12:4): Limestone, body fragment decorated with small incised circles.
No. 2254; D.2:80B Stratum 11: Limestone, base of a measuring cup.
No. 2309; B.2:135 Strata 15/16 (fig. 9.12:5): Basalt, rim of a large, shallow bowl.
No. 2370; D.4:85 Stratum 12: Basalt, fragment of a cylindrical foot.
No. 2411; F.31.8: Alabaster, shallow bowl on three feet, rim indented in a wave-like pattern.
No. 2423; C.7:51 Stratum 6 (fig. 9.12:6): Schist, foot of a vessel, with decoration.
No. 2443; D.4:99 Stratum 13: Basalt, rim of a shallow bowl.
No. 2571; C.8:26 Stratum 2 (fig. 9.12:7): Basalt, portion of a large tripod bowl.
No. 2626; C.7:68 Stratum 13: Limestone, body fragment.
No. 2661; C.5:176 Stratum 6: Basalt, rim of a bowl.

Figure 9.10 Stone Vessel Fragments.

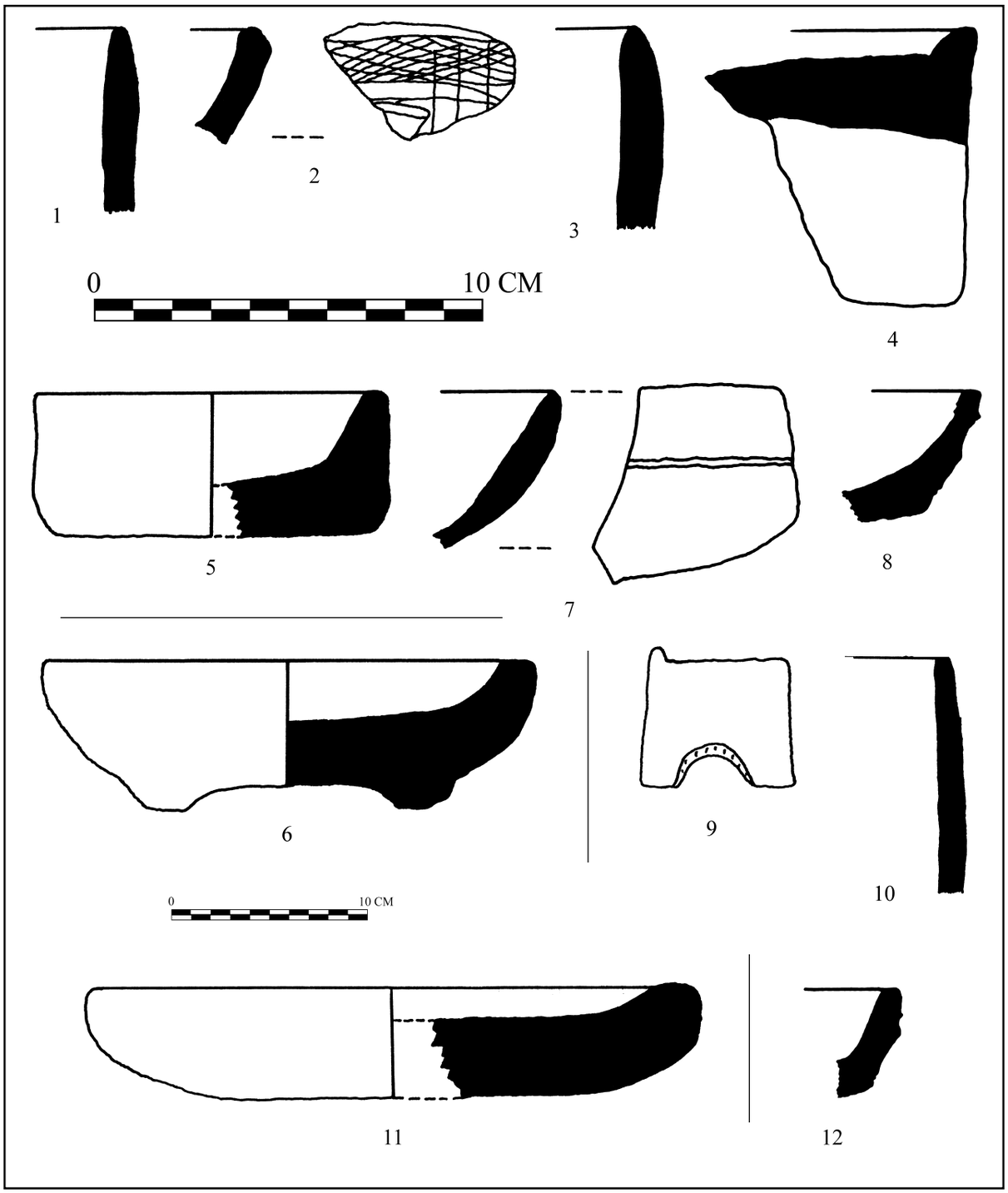


No. 2745; F.27.8 (fig. 9.12:8): Basalt, fragment of a large bowl.
No. 2823; C.1:139 Stratum 18: Basalt, portion of cylindrical foot of a bowl.

Slingstones and Slingstone Fragments

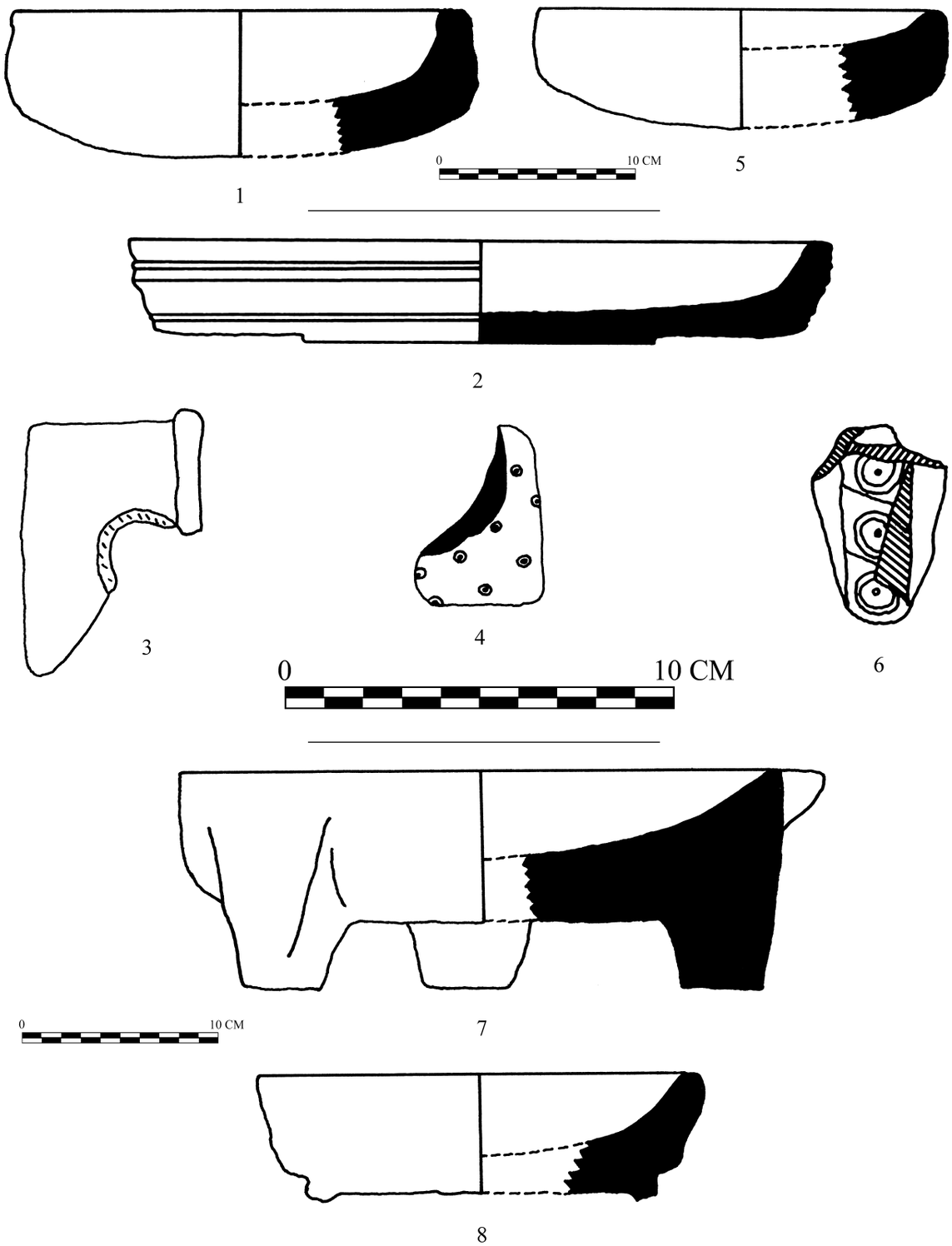
Numerous spherical-shaped stones were found at Hesban which may be classified as slingstones. The great majority of these are made of chert; the

Figure 9.11 Stone Vessel Fragments.



remainder were made of basalt (3 objects) and limestone (3 objects). The average diameter of these stones is 6.32 cm and their average weight is 234 grams. Parallels exist at Lachish, where the

Figure 9.12 Stone Vessel Fragments.



average diameter of a group of similar slingstones was 6 cm and the average weight was 256 grams (Tufnell 1953: 396). This indicates a uniformity in size and weight, for while the Lachish examples all come from Iron Age II strata, the Hesban slingstones were found in Iron Age, Late Hellenistic, and Mamluk-period contexts. The similarity in size and weight might possibly be a result of finding the optimum size and weight. The span of time in which these slingstones were used seems to show the continuity of military tactics over a span of two thousand years.

No. 54; B.1:4 Stratum 9: Chert, 7.5 cm in diameter.
No. 144; C.1:5 Stratum 3: Basalt, 4.75 cm in diameter.
No. 189; A.1:57 Stratum 9: Chert, 3.5 cm in diameter.
No. 225; C.3:5 Stratum 3: Chert, 3.4 cm in diameter.
No. 325; C.4:7 Stratum 3: Chert, 4.5 cm in diameter.
No. 402; C.4:27 Stratum 3: Chert, 7.2 cm in diameter, half of the stone extant.
No. 420; C.4:19 Stratum 3: Chert, 4.0 cm in diameter.
No. 427; C.4:23 Stratum 3: Chert, 5.3 cm in diameter.
No. 440; C.4:37 Stratum 3: Limestone, 4.5 cm in diameter.
No. 444; C.4:37 Stratum 3: Basalt, 7.6 cm in diameter.
No. 551; C.4:25 Stratum 3: Chert, 5.1 cm in diameter.
No. 561; D.1:44 Stratum 11: Limestone, oval shaped, 5.5 x 6.5 x 4.15 cm
No. 567; B.1:76 Strata 15/16: Chert, 6.9 cm in diameter.
No. 767; B.1:91 Strata 15/16: Chert, 7.85 cm in diameter.
No. 815; B.1:92 Strata 15/16: Chert, 6.3 cm in diameter.
No. 822; B.3:22 Stratum 9: Chert, 4.2 cm in diameter.
No. 980; C.5:5 Stratum 3: Chert, 7.7 cm in diameter.
No. 1124; B.4:49 Stratum 13: Chert, 3.78 cm in diameter.
No. 1145; D.6:44 Stratum 14: Chert, 8.0 cm in diameter.
No. 1206; B.3:46 Stratum 13: Chert, 5.1 cm in diameter.
No. 1223; A.5:1 Stratum 1: Chert, 9.1 cm in diameter.
No. 1318; B.2:72 Strata 15/16: Chert, 7.1 cm in diameter.
No. 1320; B.2:73 Strata 15/16: Chert, 7.9 cm in diameter.
No. 1357; F:Survey Site: Chert, 4.2 cm in diameter.
No. 1371; D.4:1 Stratum 2: Basalt, 5.4 cm in diameter.
No. 1372; C.2:18 Stratum 5: Chert, 5.0 cm in diameter.
No. 1404; B.2:83 Stratum 15: Chert, 7.3 cm in diameter.
No. 1431; B.2:83 Stratum 15: Chert, 4.1 cm in diameter.
No. 1452; C.2:28 Stratum 14: Chert, 6.9 cm in diameter.
No. 1453; B.4:82 Stratum 15: Chert, 7.35 cm in diameter.
No. 1454; D.1:56 Stratum 13: Chert, 7.3 cm in diameter.
No. 1455; B.2:82 Stratum 15: Limestone, oval shaped, L 7.1 cm, W 5.4 cm.
No. 1486; G.1:45: Chert, 4.65 cm in diameter.
No. 1487; B.3:70 Stratum 15: Chert, 7.2 cm in diameter.
No. 1545; D.6:62 Stratum 11: Chert, 5.85 cm in diameter.
No. 1600; C.3:41 Stratum 16: Chert, 7.71 cm in diameter.
No. 1661; B.4:120 Stratum 14: Chert, 5.7 cm in diameter.
No. 1672; C.2:51 Stratum 16: Chert, 7.0 cm in diameter.
No. 1673; C.2:51 Stratum 16: Chert, 5.8 cm in diameter.
No. 1789; C.2:58 Stratum 16: Chert, 7.0 cm in diameter.
No. 1792; C.1:105 Stratum 14: Chert, 6.83 cm in diameter.
No. 1794; D.1:68 Stratum 14: Chert, 5.4 cm in diameter.
No. 1798; D.1:63D Stratum 13: Chert, 7.25 cm in diameter.
No. 1817; C.2:94 Stratum 21: Chert, 6.6 cm in diameter.
No. 1869; A.7:103 Stratum 6: Chert, 7.95 cm in diameter.
No. 1881; C.6:16 Strata 2-3: Chert, 4.4 cm in diameter.

No. 1969; B.4:254 Stratum 14: Chert, 6.47 cm in diameter.
No. 2012; G.5:1: Chert, 6.8 cm in diameter.
No. 2366; C.6:4 Stratum 3: Chert, 6.98 cm in diameter.
No. 2386; C.6:21A Stratum 3: Chert, 3.4 cm in diameter.
No. 2610; D.4:119 Stratum 15: Chert, 6.3 cm in diameter.
No. 2611; D.4:119 Stratum 15: Chert, 5.4 cm in diameter.
No. 2625; D.4:121 Stratum 15: Chert, 6.6 cm in diameter.
No. 2634; B.7:22 Stratum 9: Chert, 6.7 cm in diameter.
No. 2659; C.5:177 Stratum 6: Chert, 6.9 cm in diameter.
No. 2780; C.1:138 Stratum 18: Chert, 3.0 cm in diameter.
No. 2789; C.9:18 Stratum 3: Chert, 5.7 cm in diameter.
No. 2820; C.9:18 Stratum 3: Chert, 4.7 cm in diameter.
No. 2821; C.6:83: Chert, 5.6 cm in diameter.
No. 2865; G.15:27: Chert, 3.9 cm in diameter.
No. 2893; A.6:North Balk Removal: Chert, 6.95 cm in diameter.
No. 2894; C.9:45 Stratum 3: Chert, 3.8 cm in diameter.
No. 2911; C.9:46 Stratum 3: Chert, 5.7 cm in diameter.
No. 2920; C.5:Balk Removal: Chert, 6.3 cm in diameter.

Architectural Fragments

A small number of architectural fragments were found in various strata. They were made of schist, limestone, sandstone, and marble.

Schist

Only one fragment of schist was found, but it appears to have been part of a frieze and may be related to the Byzantine Church in Area A, in that it comes from a Late Byzantine locus in that area.

Limestone

Because of its abundance, it is not surprising that the large majority of architectural fragments were made of limestone. Included here is a small fragment with a linear design (fig. 9.13:3), and a portion of what appears to have been a wall relief (fig. 9.13:5). Several other fragments, including portions of acanthus leaves from column capitals, a miniature capital, and portions of two column drums have been found.

Sandstone

There is a piece of carved molding (fig. 9.13:4), and a fragment of what appears to be wall decoration (fig. 9.13:6) made of sandstone.

Marble

Marble architectural fragments include a facing stone (fig. 9.14:1), and a small, flat piece (fig. 9.14:2) as well as a rim-like piece (fig. 9.13:2) which is very similar to an object found on Mt. Nebo (Smaller 1941: 291, fig. 32.8; pl. 126.19). Other marble objects include a capital shaped like a ram's head, and a facing stone with a linear design, both of which are on display in the Amman Museum. The fragments come from various Islamic period strata.

No. 97; D.2:4 Stratum 3: Limestone, possibly a facing stone.
No. 173; A.3:11 Stratum 8 (fig. 9.13:1): Schist, possibly part of a frieze.
No. 214; C.1:6 Stratum 3 (fig. 9.13:2): Marble.
No. 298; D.1:28 Stratum 6: Marble, capital shaped like a ram's head.
No. 324; A.4:19 Stratum 11: Limestone, portion of a column.
No. 345; B.4:1 Stratum 2: Limestone, part a of molding.
No. 396; C.4:25 Stratum 3 (fig. 9.13:3): Limestone, linear design.
No. 530; B.4:1 Stratum 2: Limestone, fragment of a leaf from a capital.
No. 550; C.4:44: Limestone.
No. 554; C.4:44 (fig. 9:13:4): Sandstone, part of a molding.
No. 558; C.5:1 Stratum 2 (fig. 9.13:5): Limestone, relief carving from a wall.
No. 792; D.5:7 Stratum 3: Limestone, probably from a wall decoration.
No. 821; B.3:25 Stratum 10: Limestone, fragment of a leaf from a capital.
No. 824; C.4:55 Stratum 6: Marble, fragment of a facing stone.

No. 1116; A.5:9 Stratum 9: Limestone, a small capital.
No. 1307; D.3:24 Stratum 13: Limestone, decorated column fragment.
No. 1390; D.3:37 Stratum 9: Limestone, column fragment.
No. 1803; C.6:16 Strata 2-3: Marble, fragment of a slab with linear design.
No. 1866; C.6:16 Strata 2-3 (fig. 9.13:6): Sandstone, possibly part of a wall decoration.
No. 1911; A.9:36 Stratum 3: Limestone, fragment of a leaf from a capital.
No. 2282; C.4:15 Stratum 2 (fig. 9.14:1): Marble, facing stone.
No. 2285; C.1:121 Cleanup (fig. 9.14:2): Marble, small piece from a facing stone.

Sculpture Fragments

Four fragments of marble found at Hesban appear to have been part of marble sculptures. Figure 9.15:1 is a fragment of the upper arm of a small statue. Figure 9.15:2 is a dog bone-shaped piece of marble, flat on one side. It is not clear as to what type of sculpture it belonged. Other sculpture fragments include a piece of an upper arm broken off at the shoulder, and a cylindrical piece of marble. The other two objects date to the Mamluk period, while the two objects mentioned above were not found in context.

No. 332b; A.2:17 Cleanup (fig. 9.15:1): Marble, upper arm of small statue.
No. 435; B.2:1 Stratum 2: Marble, portion of an upper arm broken off at the shoulder of a small statue.
No. 539; C.4:37 Stratum 3: Marble, cylindrical piece, unidentifiable.
No. 968; C.1 (fig. 9.15:2): Marble, shaped like a large dog bone.

Mace Heads

Three basalt mace heads were uncovered at Hesban. One (Object 1427), is pear shaped, but seems to be unfinished, as there is no hole through the center. Object 1506 (fig. 9.16:1) is a fragment making up half of a biconically drilled mace. The third example (fig. 9.16:2) is a mace head, cylindrical in shape, which has a hole in each end. However, the holes do not meet in the center.

No. 1427; B.3:62 Stratum 15: Basalt, pear-shaped, hole not completed.
No. 1506; A.8:1 Stratum 3 (fig. 9.16:1): Basalt, half of biconically drilled mace.
No. 1601; B.3:73 Stratum 13 (fig. 9.16:2): Basalt, cylindrical mace with holes drilled in both ends but which do not meet.

Stone Weights

A large number of stones which appear to have served as weights were found at Hesban. Four dome-shaped limestone weights were excavated, but unfortunately none were inscribed (figs. 9.17:1, 3, 5). Two of the weights are cone-shaped pieces of limestone, one (fig. 9.17:9) from the end of Iron Age I. Two oval-shaped pieces of quartz have been classified as weights. It is possible, however, that they served other purposes. Several irregularly-shaped pieces of stone have been designated as possible weights. Of special interest here are a limestone piece which looks much like a quarter of a circle from the side (fig. 9.17:8), and a piece of sandstone with incisions around it (fig. 9.17:7). A couple of others are pillow-shaped (fig. 9.17:2, 6).

A number of limestone pebbles were collected as possible weights. However, because of their extremely small size and the lack of any correlation in weight among them, it would seem that they cannot be so classified. They are, however, included in the catalog for the sake of completeness.

The variations in mass among the different weights did not give any clear picture of a fixed standard. A comparison of the weights to various known standards of the ancient world did not yield any correlation either, so it seems impossible to relate any of these weights to established ancient standards or to use these weights to perhaps establish a standard for Hesban and its vicinity.

No. 38; B.1:22 Stratum 13: Limestone, irregular in shape, 79.29 grams.
No. 39; C.2:7 Stratum 3: Limestone, pebble-shaped, 5.23 grams.
No. 147; B.1:14A Stratum 15 (fig. 9.17:1): Limestone, dome-shaped, actual 12.36 grams, restored 25 grams.
No. 245; B.1:39 Stratum 15: Hematite, irregular in shape, 163.31 grams.
No. 288; C.3:77 Stratum 6 (fig. 9.17:2): Black Stone, pillow-shaped, 6.04 grams.

Figure 9.13 Architectural Fragments.

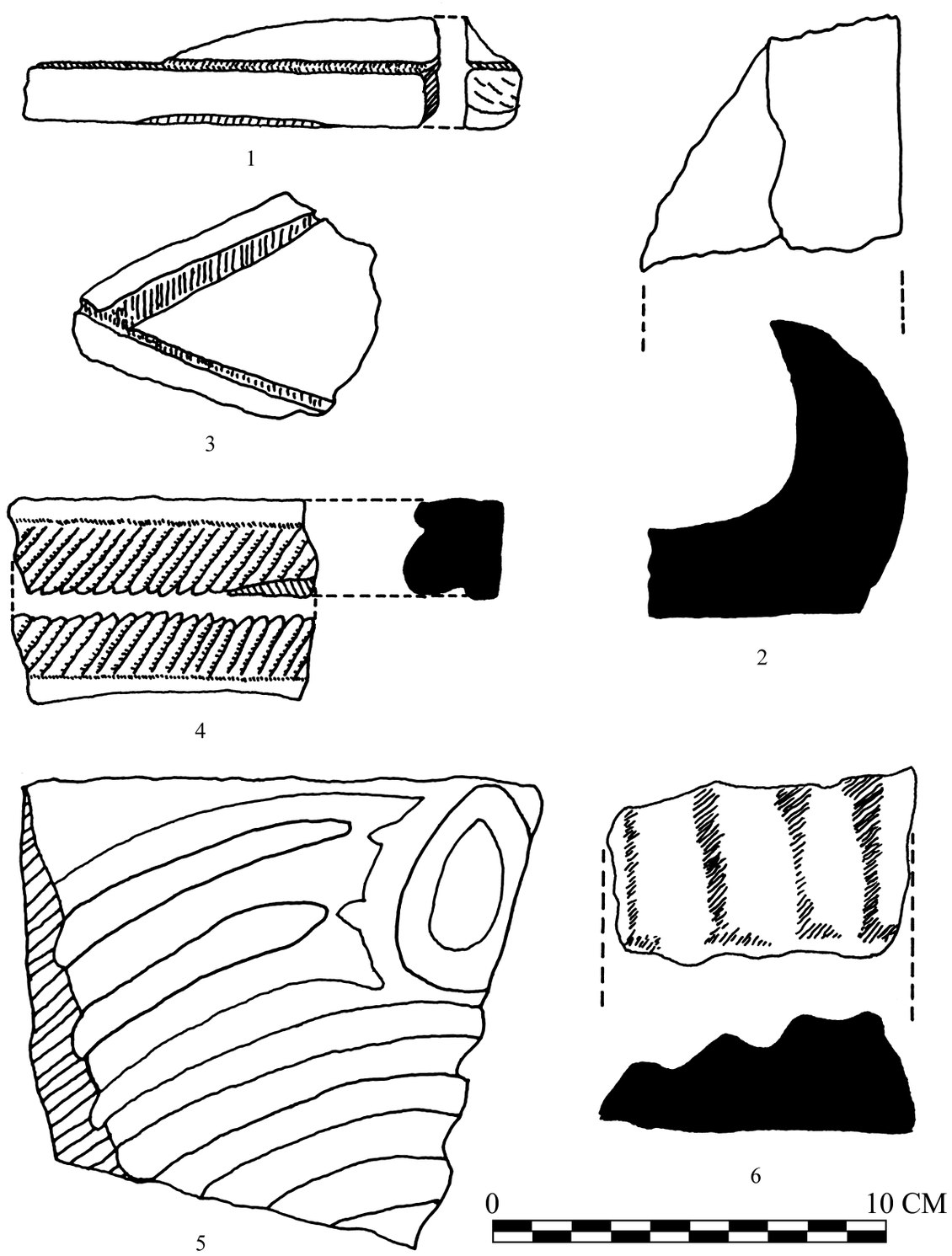
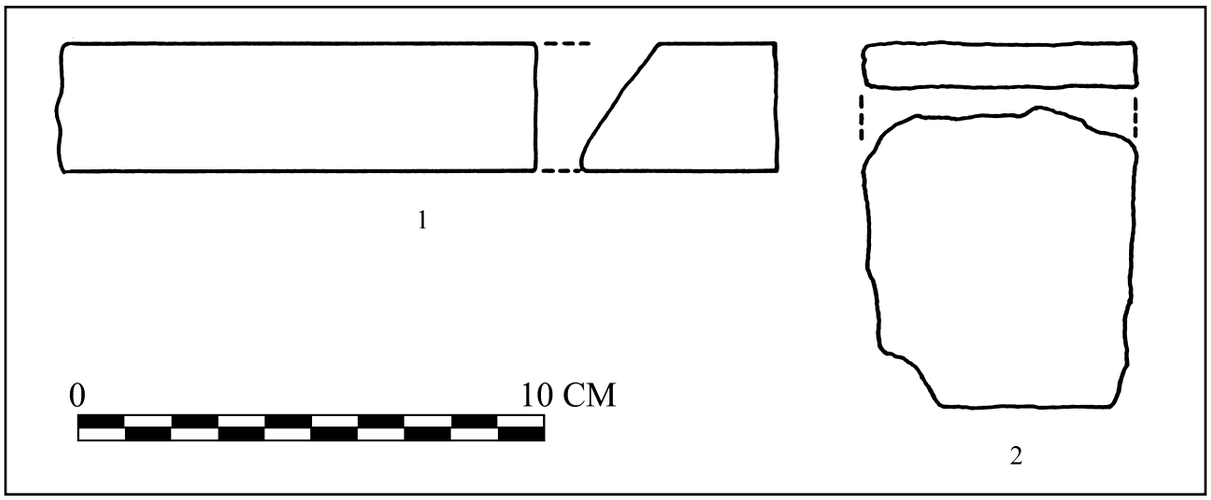


Figure 9.14 Architectural Fragments.



No. 393; B.2:1 Stratum 1 (fig. 9.17.3): Limestone, dome-shaped, 70.21 grams.
No. 433; C.4:34 Stratum 3: Limestone, irregular in shape, 23.59 grams.
No. 552; C.4:25 Stratum 3: Quartz, oval-shaped, 52.32 grams.
No. 813; C.5:3 Stratum 3: Limestone, irregular in shape, 19.05 grams.

Figure 9.15 Sculpture Fragments.

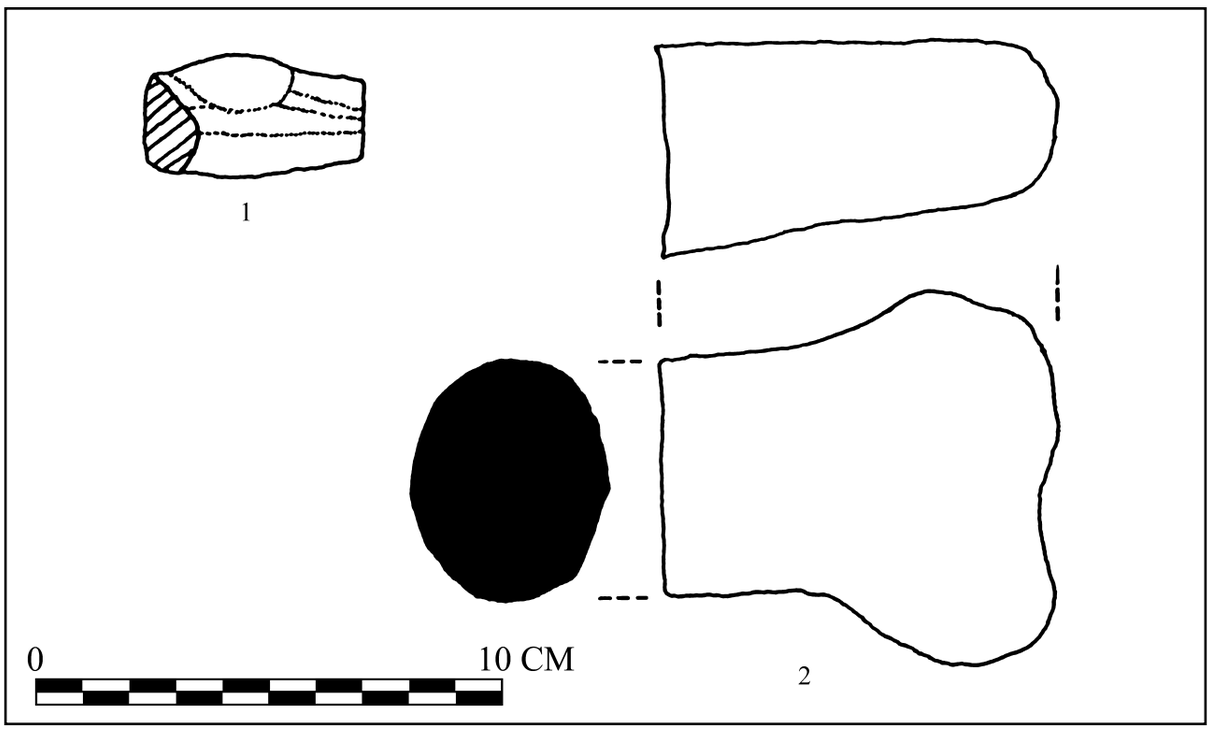
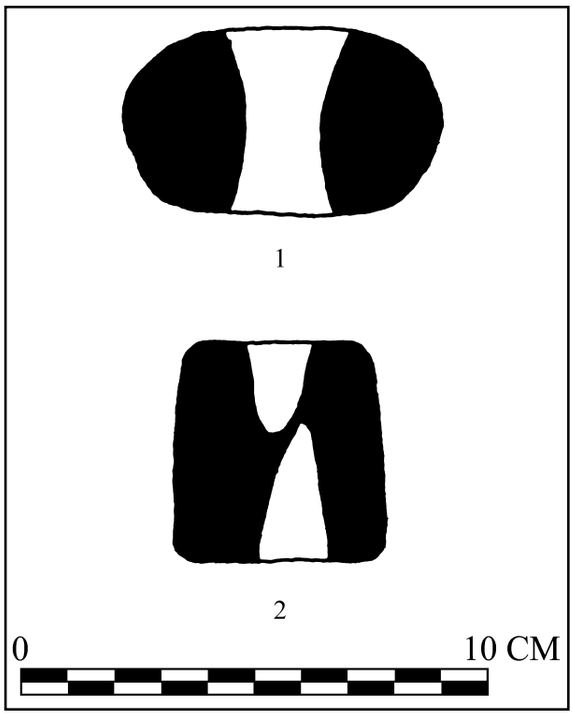


Figure 9.16 Mace Heads.



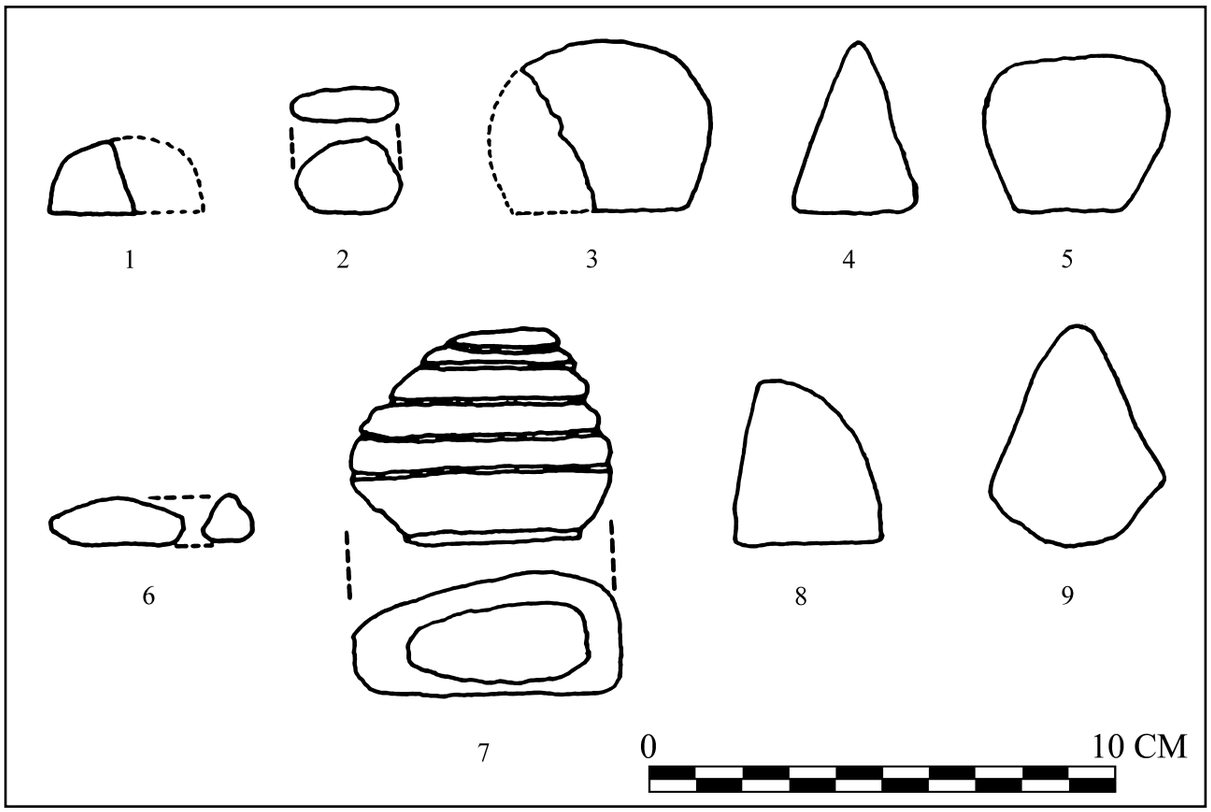
No. 970; C.5:5 Stratum 3 (fig. 9.17:4): Limestone, conically-shaped, 36.06 grams.
No. 1126; B.4:59 Stratum 13 (fig. 9.17:5): Limestone, dome-shaped, 90.75 grams.
No. 1190; C.6:5 Stratum 2: Limestone, pebble-shaped, 2.30 grams.
No. 1396; B.2:44 Stratum 13: Basalt, cylindrical in shape, 225.24 grams.
No. 1782; D.3:57E Stratum 14: Limestone, dome-shaped (?), 160.79 grams.
No. 1831; D.3:81 Stratum 13: Limestone, pebble-shaped, 5.30 grams.
No. 1957; G.9:2 (fig. 9.17:6): Quartz, pillow-shaped, 4.59 grams.
No. 1998; C.7:30 Stratum 3: Limestone, pebble-shaped, 12.98 grams.
No. 2038; B.4:264 Stratum 14:Limestone, pebble-shaped, 5.08 grams.
No. 2213; C.5:58 Cleanup (fig. 9.17:7): Sandstone, irregular in shape, with concentric circles incised around it, 114.21 grams.
No. 2218; C.1:122 Cleanup: Limestone, pebble-shaped, 2.93 grams.
No. 2280; C.6:34 Stratum 3: Limestone, pebble-shaped, 3.72 grams.
No. 2300; C.8:18 Stratum 3: Limestone, irregular in shape, 47.48 grams.
No. 2306; C.1:124 Stratum 18: Limestone, pebble-shaped, 10.25 grams.
No. 2419; C.1:124 Stratum 18: Limestone, pebble-shaped, 4.94 grams.
No. 2439; C.1:123B Stratum 17: Limestone, pebble-shaped, 1.02 grams.
No. 2519; C.5:134 Stratum 3: Limestone, irregular in shape, 17.18 grams.
No. 2528; C.5:134 Stratum 3: Limestone, pebble-shaped, 7.62 grams.
No. 2529; C.5:132 Stratum 3: Limestone, pebble-shaped, 1.52 grams.
No. 2543; A.6:1 Stratum 1: Limestone, pebble-shaped, 1.07 grams.
No. 2586; C.9:14 Stratum 2: Limestone, pebble-shaped, 2.83 grams.
No. 2633; C.16:2 Stratum 2 (fig. 9.17:8): Limestone, irregular in shape, 49.19 grams.
No. 2652; C.1:133 Stratum 18 (fig. 9.17:9): Limestone, conically-shaped, 71.64 grams.
No. 2699; C.9:30 Stratum 2: Limestone, pebble-shaped, 3.79 grams.
No. 2700; C.9:29 Stratum 2: Limestone, pebble-shaped, 6.67 grams.
No. 2822; G.15:Balk Trim: Quartz, oval-shaped, 60.44 grams.
No. 2866; C.15:29 Stratum 3: Limestone, pebble-shaped, 10.16 grams.

Miscellaneous Stone Objects

During the excavations at Hesban a number of stone objects were uncovered which were definitely worked (figs. 9.18-19), but whose function is unclear.

No. 55; C.2:6 Stratum 3 (fig. 9.18:1): Limestone, flat, triangular-shaped stone.
No. 142; C.1:5 Stratum 3 (fig. 9.18:2): Limestone, disc with two holes in the center.
No. 520; D.6:15 Stratum 3 (fig. 9.18:3): Basalt, disc of a very porous basalt; shows no sign of use.
No. 769; B.1:84 Strata 15/16: Stone, resembles a pulley; use is unclear.
No. 778; B.4:15 Stratum 4 (fig. 9.18:4): Limestone, small piece with a hole near one end.
No. 795; D.8:3: Basalt, similar to Object 769.
No. 819; A.5:17 Stratum 9 (fig.9.18:5): Limestone, small cylindrical stone with incised decoration.
No. 881; C.1:6 Stratum 3 (fig.9.18:6): Basalt, cir-

Figure 9.17 Stone Weights.



cular piece of porous basalt with depression in center.
No. 896; D.5:5D Stratum 3: Limestone, small disc.
No. 1348; C.3:12 Cleanup (fig. 9.18:7): Limestone, finger-shaped object with 2 holes.
No. 1445; C.2:28 Stratum 14 Limestone, crudely shaped scoop.
No. 1784; C.7:14 Stratum 3 (fig. 9.18:8): Limestone, decorated cylinder.
No. 1850; C.2:76: Stone, very shallow stone with a depression in the center.
No. 2281; C.6:24 Stratum 3: Sandstone, small stone, triangular in section, with design.
No. 2330; C.5:98 Stratum 3 (fig. 9.18:9): Sandstone, shaped but use unclear.
No. 2359; C.4:17 Stratum 2 (fig. 9.19:1): Limestone, disc, polished on top and bottom, possibly a tessera.
No. 2407; C.8:11 Stratum 2 (fig. 9.19:2): Limestone, disc with several holes, possible strainer that fits into neck of vessel.
No. 2544; C.5:134 Stratum 3 (fig. 9.19:3): Limestone, well-shaped cylindrical stone.
No. 2545; A.6:1 Stratum 1: Limestone, large stone with a linear design.
No. 2551; C.7:62 Stratum 10: Stone, large stone with two cup-shaped depressions on opposite sides, use unclear.
No. 2597; A.10:4 Stratum 1-2 (fig. 9.19:4): Schist, use unclear.
No. 2913; C.8:46 Stratum 3: Agate, oval stone, use unclear.

Clay Objects

Plaster Fragments

During the excavations at Hesban, five pieces of plaster were registered as objects. One fragment is just a knob-shaped piece of gray plaster (fig. 9.20:4). Another piece of plaster with a relief design (fig. 9.20:1) comes from a Mamluk period

Figure 9.18 Miscellaneous Stone Objects.

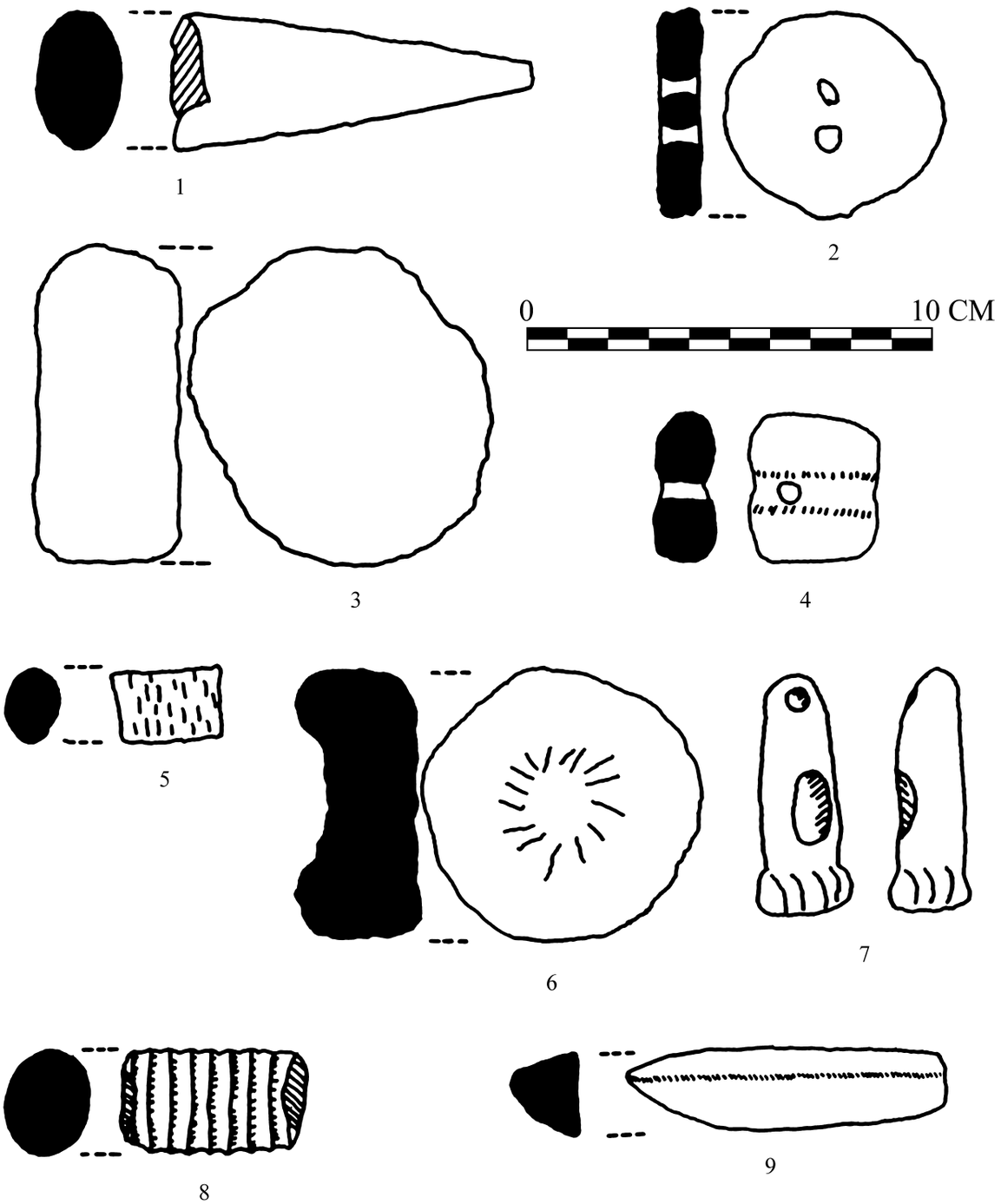
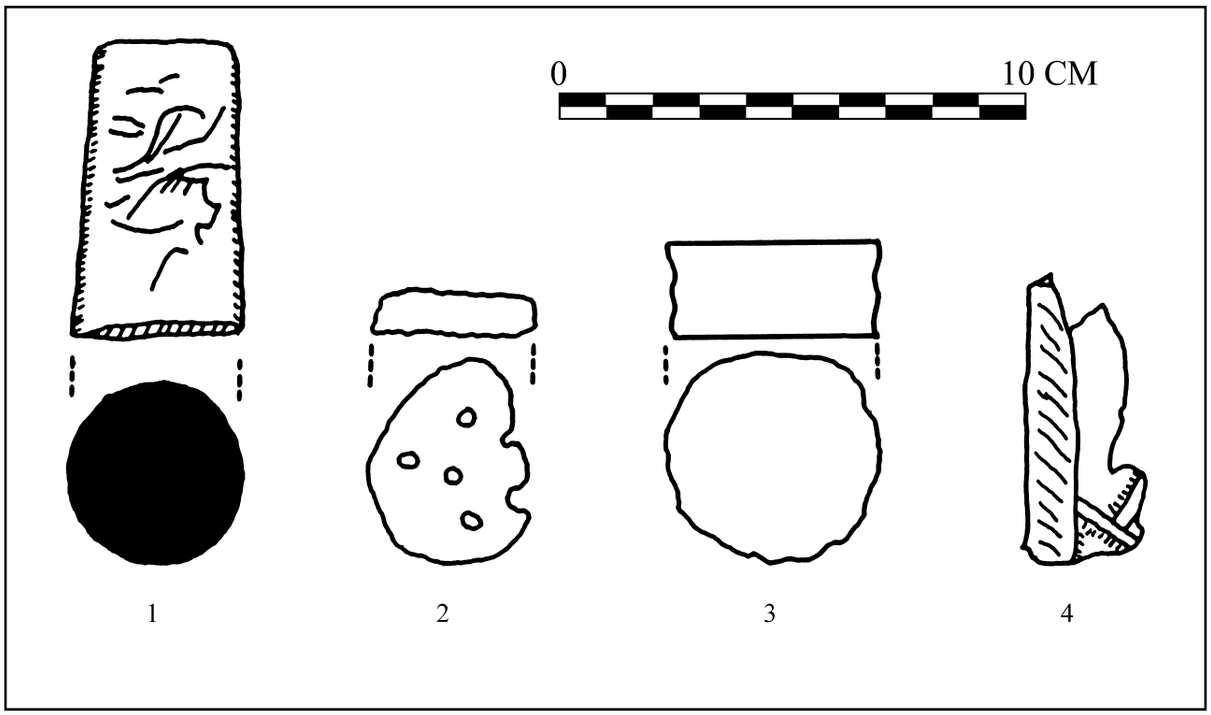


Figure 9.19 Miscellaneous Stone Objects.



locus. There is also a small piece of wall plaster with its surface painted red (fig. 9.20:5). It was found amid the ruins of the North Church, and it is very possible that it is a portion of the plaster which decorated the walls of that building. Two pieces of plaster decoration (figs. 9.20:2-3) were found in a Late Roman context, and probably also served as a decoration on a wall or apse.

No. 776; B.4:6 Stratum 2 (fig. 9.20:1): Plaster, grey with relief design.
No. 1682; D.4:34 Stratum 11 (fig. 9.20:2): Plaster, architectural decoration.
No. 1886; D.4:49 Stratum 10 (fig. 9.20:3): Plaster, architectural decoration.
No. 2358; A.8:14 Strata 2-3 (fig. 9.20:4): Plaster, small knob, use unclear.
No. 2892; G.16:19 (fig. 9.20:5): Plaster, small piece of red wall painting.

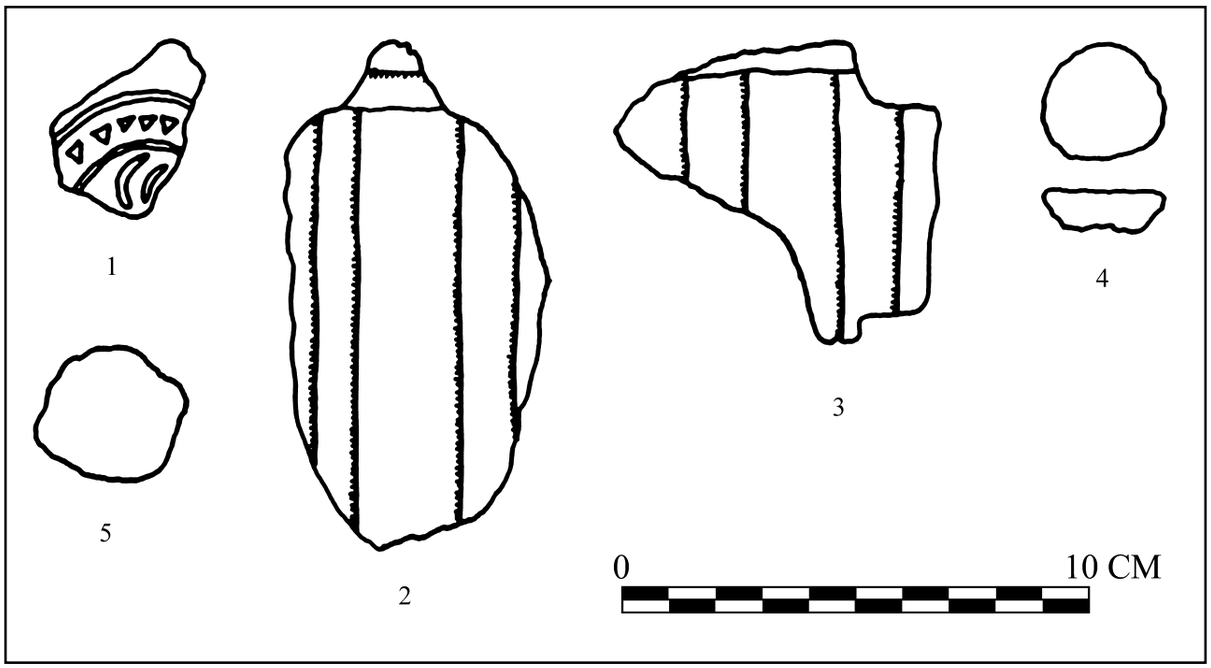
Unbaked Clay Weights

A group of clay balls from the Early Mamluk period appear to have been weights. They are all made of a light-brown-colored unfired clay and can be divided into two main groups. One group averages 2.1 cm in diameter with an average weight of 7.62 grams. The second group averages 2.28 cm in diameter and weighs approximately 12.15 grams. One example varies significantly from these categories. It weighs 1.70 grams and is 1.3 cm in diameter.

The uniformity of these clay balls is striking, and seems to indicate that they were made for a very specific purpose. We proposed that they are weights. If this view is correct, the two average values for mass may represent a local standard, as a comparison of these values with known standards of the time failed to yield any correlation.

No. 71; D.1:6 Stratum 3: 2.6 cm in diameter, 12.06 grams.
No. 395; C.4:19 Stratum 3: 3.7 cm in diameter, 13.13 grams.
No. 541; D.6:16 Stratum 3: 2.4 cm in diameter, 12.61 grams.
No. 542; D.6:20 Stratum 3: 2. 25 cm in diameter, actual 11.10 grams, restored 12 grams.
No. 646; D.6:26 Stratum 3: 2.28 cm in diameter, actual 9.39 grams, restored 11.5 grams.

Figure 9.20 Plaster Fragments.



No. 647; D.6:26 Stratum 3: 2.23 cm in diameter, actual 11.22 grams, restored 12 grams.
No. 648; D.6:26 Stratum 3: 2.35 cm in diameter, actual 11.19 grams, restored 12 grams.
No. 664; D.6:27 Stratum 3: 2.33 cm in diameter, 12.17 grams.
No. 665; D.6:27 Stratum 3: 2.41 cm in diameter, actual 11.99 grams, restored 12.5 grams.
No. 796; D.6:27 Stratum 3: 2.4 cm in diameter, 11.94 grams.
No. 846; D.5:5F Stratum 3: 2.1 cm in diameter, 7.14 grams.
No. 919; D.6:33B Stratum 3: 2.32 cm in diameter, actual 8.95 grams, restored 12 grams.
No. 920; D.6:33B Stratum 3: 2.23 cm in diameter, actual 10.05 grams, restored 11.5 grams.
No. 921; D.6:33B Stratum 3: 2.23 cm in diameter, actual 9.99 grams, restored 11.5 grams.
No. 983; D.6:337 Stratum 3: 2.23 cm in diameter, actual 5.95 grams, restored 11.5 grams.
No. 989; D.6:33E Stratum 3: 2.28 cm in diameter, actual 9.81 grams, restored 11.5 grams.
No. 990; D.6:33E Stratum 3: 2.44 cm in diameter, actual 11.20 grams, restored 12 grams.
No. 991; D.6:33E Stratum 3: 2.32 cm in diameter, actual 8.44 grams, restored 11 grams.
No. 1104; A.6:30 Stratum 4: 2.1 cm in diameter, 7.36 grams.
No. 1156; D.6:33D Stratum 3: 2.33 cm in diameter, 10.75 grams.
No. 1472; A.7:3 Stratum 3: 2.4 cm in diameter, weight unavailable.
No. 1630a; A.7:2 Stratum 3: 2.0 cm in diameter, actual 7.40 grams, restored 12.5 grams.
No. 1630b; A.7:2 Stratum 3: 2.5 cm in diameter, actual 9.67 grams, restored 12 grams.
No. 1684a; A.7:29 Stratum 3: 2.4 cm in diameter, 12.04 grams.
No. 1684b; A.7:29 Stratum 3: 2.4 cm in diameter, 11.94 grams.
No. 1684c; A.7:29 Stratum 3: 2.5 cm in diameter, 12.46 grams.
No. 1684d; A.7:29 Stratum 3: 2.4 cm in diameter, actual 12.03 grams, restored 12.5 grams.
No. 1684e; A.7:29 Stratum 3: 2.4 cm in diameter, actual 11.72 grams, restored 12 grams.
No. 1684f; A.7:29 Stratum 3: 2.4 cm in diameter, actual 10.84 grams, restored 12 grams.
No. 1684g; A.7:29 Stratum 3: 2.4 cm in diameter, actual 8.95 grams, restored 12.5 grams.
No. 1684h; A.7:29 Stratum 3: 2.4 cm in diameter, actual 10.46 grams, restored 12 grams.

No. 1684i; A.7:29 Stratum 3: 2.4 cm in diameter, actual 10.41 grams, restored 12 grams.
No. 1684j; A.7:29 Stratum 3: 2.4 cm in diameter, actual 5.25 grams, restored 11.5 grams.
No. 1726; D.2:44 Cleanup: 2.1 cm in diameter, 8.59 grams.
No. 2458a; A.10:11 Stratum 3: 2.3 cm in diameter, 13.30 grams.
No. 2458b; A.10:11 Stratum 3: 2.4 cm in diameter, actual 11.89 grams, restored 12.5 grams.
No. 2458c; A.10:11 Stratum 3: 2.3 cm in diameter, actual 11.62 grams, restored 12 grams.
No. 2458d; A.10:11 Stratum 3: 2.3 cm in diameter, actual 11.44 grams, restored 13 grams.
No. 2458e; A.10:11 Stratum 3: 2.3 cm in diameter, actual 12.25 grams, restored 13 grams.
No. 2527; C.5:134 Stratum 3: 1.3 cm in diameter, 1.70 grams.
No. 2585; A.10:13 Stratum 3: 2.3 cm in diameter, 12.11 grams.

Rattles

Three hollow balls of unbaked clay with some type of noisemaker inside have been classified as rattles. They all were found in loci which date to the Mamluk period.

No. 301; C.4:7 Stratum 3: Unbaked clay, hollow ball with noisemaker inside, 2.8 cm in diameter.
No. 1136; C.6:1 Stratum 2: Unbaked clay, hollow egg-shaped ball with noisemaker, 3.28 × 2.65 × 0.6 cm in diameter.
No. 1629; A.7:2 Stratum 3: Unbaked clay, hollow ball with noisemaker inside, 3.4 cm in diameter.

Tiles and Bricks

A small number of tiles and bricks were found during the Hesban excavations. Unfortunately, the small number of examples does not yield much information about this interesting aspect of ancient building practices.

Roof Tile

A decorated roof tile made of red clay was found in the Early Mamluk period (Stratum 3) (fig. 9.21:1). It cannot be definitely connected with a certain building.

Tiles

Two large rectangular tiles were found in Late Mamluk loci, both about 3 cm thick. One small tile (fig. 9.21:4), which is flat on one side and concave on the other, was found in an Ayyubid-period locus. Another rectangular tile was found in the Late Mamluk stratum, and shows the impressions of four square objects of equal size. Three heel-shaped tile objects (fig. 9.22) were also found. It is apparent from the excavation records that many more of these tiles were found, but only a few were saved. Similar objects have been found in the Islamic strata at Nebo (Saller 1941: pl. 157.51) and Dibon (Winnett and Reed 1964: pl. 18.13-14). All three of the Hesban examples came from Mamluk loci. The function of these tiles is not clear.

No. 188; A.2:9 Stratum 3 (fig. 9.21:1): Baked clay, decorated roof tile.
No. 352; D.6:1 Stratum 1: Baked clay, portion of square tile, 15.2 × 7.6 × 2.7 cm, shows impressions of four square objects of equal size.
No. 374; A.5:1 Stratum 1: Baked clay, square brick 21 × 19.5 × 6 cm.
No. 510; D.6:5 Stratum 2 (fig. 9.21:2): Baked clay, square brick, 28 × 28 × 6 cm.
No. 857; B.4:4 Stratum 9 (fig. 9.21:3): Baked clay, portion of large tile, 25.5 × 15 × 2.87 cm.
No. 894; D.1:50 Strata 6-7: Baked clay, portion of large tile, 21 × 12 × 3.1 cm.
No. 1261; B.4:15 Stratum 4 (fig. 9.21:4): Baked clay, small tile, concave on one side.
No. 1262; B.4:13 Stratum 4 (fig. 9.22:1): Baked clay, heel-shaped tile.
No. 1263; B.4:19 Stratum 3 (fig. 9.22:2): Baked clay, heel-shaped tile.
No. 2580; C.9:10 Stratum 2 (fig. 9:22:3): Baked clay, heel shaped tile.

Incised Sherds

Six pottery sherds bear incised designs (fig. 9.23:1-6). Unfortunately, it is difficult if not impossible to make any sense out of any of the designs. They do, however, seem to concentrate in two time periods (the Late Hellenistic and Early Mamluk periods).

No. 969; C.5:4 Stratum 3 (fig. 9.23:1): Body sherd, inscribed linear design.

Figure 9.21 Tiles and Bricks.

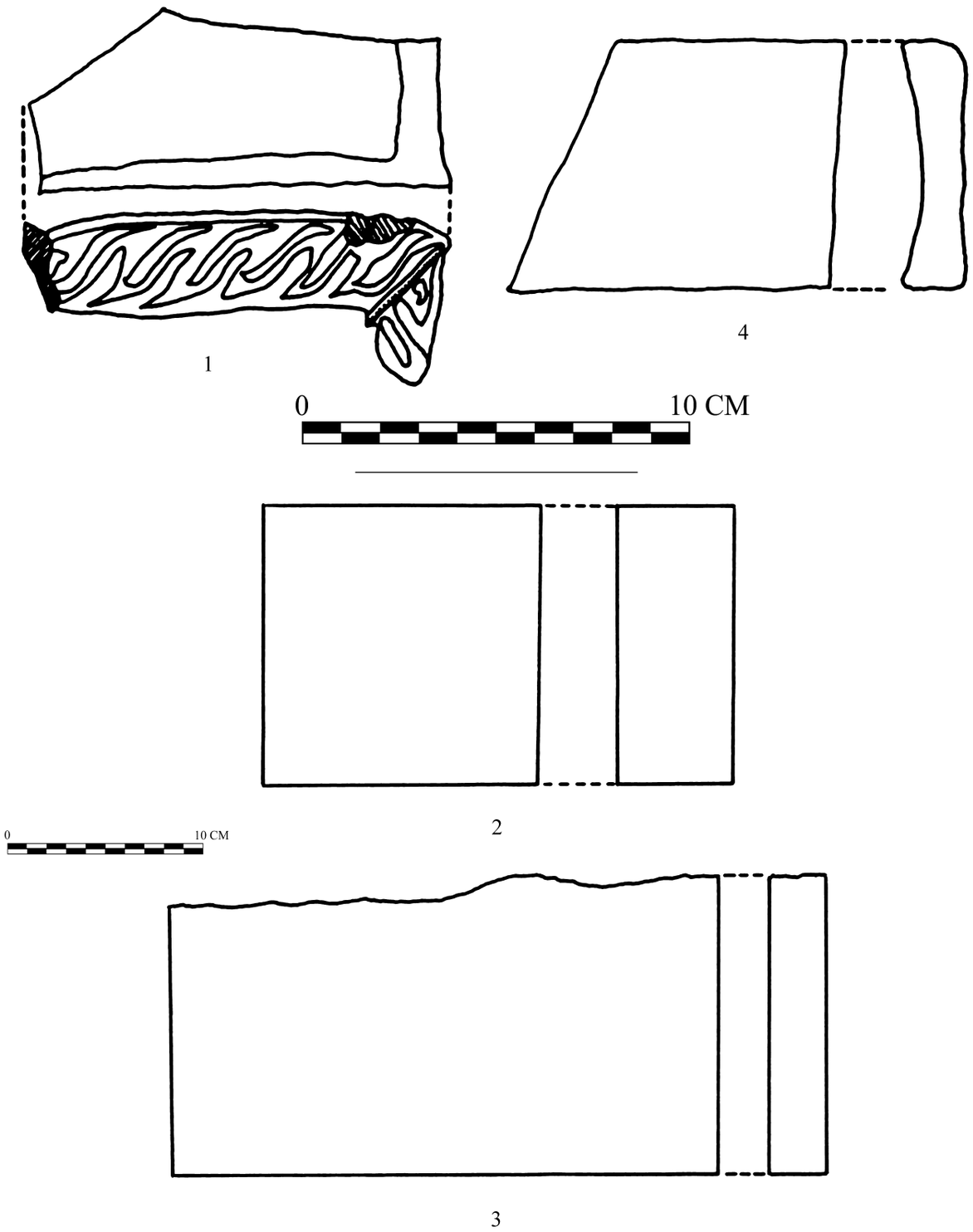
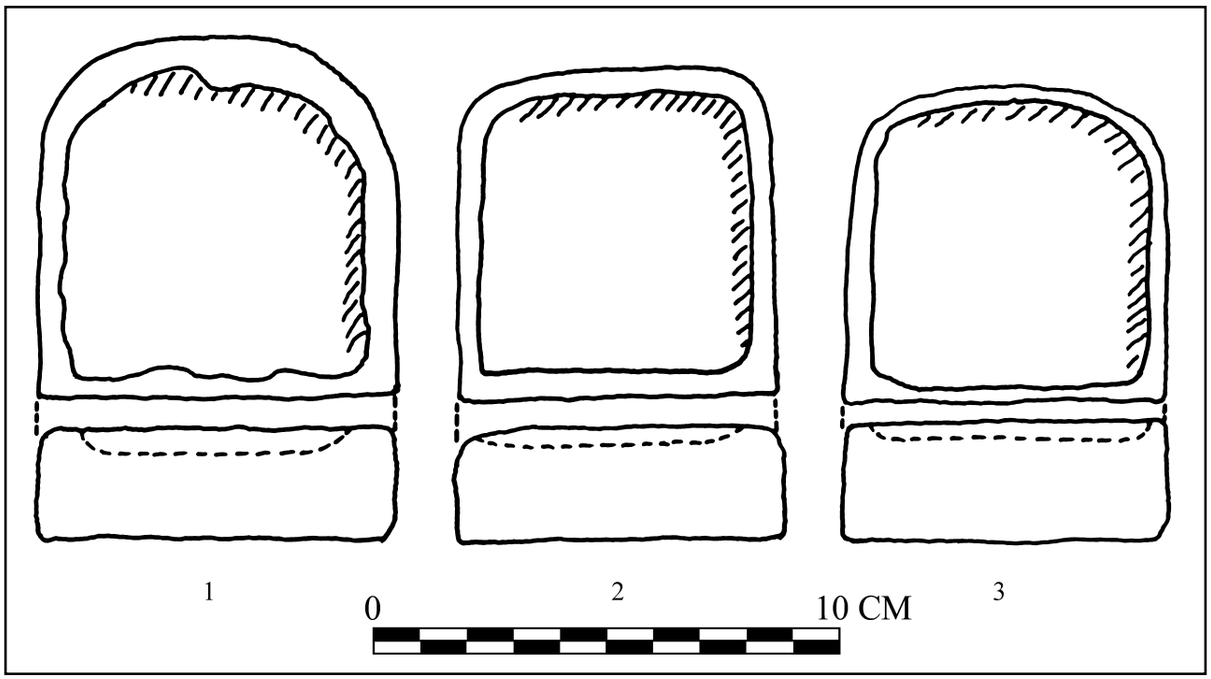


Figure 9.22 Tiles.



No. 1135; C.5:5 Stratum 3 (fig. 9.23:2): Handle (?), inscribed design.
No. 1632; C.2:35 Stratum 14 (fig. 9.23:6): Body sherd, checkerboard design.
No. 1675; D.3:52 Stratum 13 (fig. 9.23:4): Handle, incised design.
No. 1836; D.2:21 Strata 12-14 (fig. 9.23:3): Body sherd, incised design.
No. 2582; F.35:1 (fig. 9.23:5): Wedge-shaped sherd, decoration on 3 sides.

Pipe Fragments

Two fragments of Turkish pipes (fig. 9.24:1-2) made from a very dark and hard-fired clay were found during the excavations. They seem to be late intrusions into the loci in which they were found.

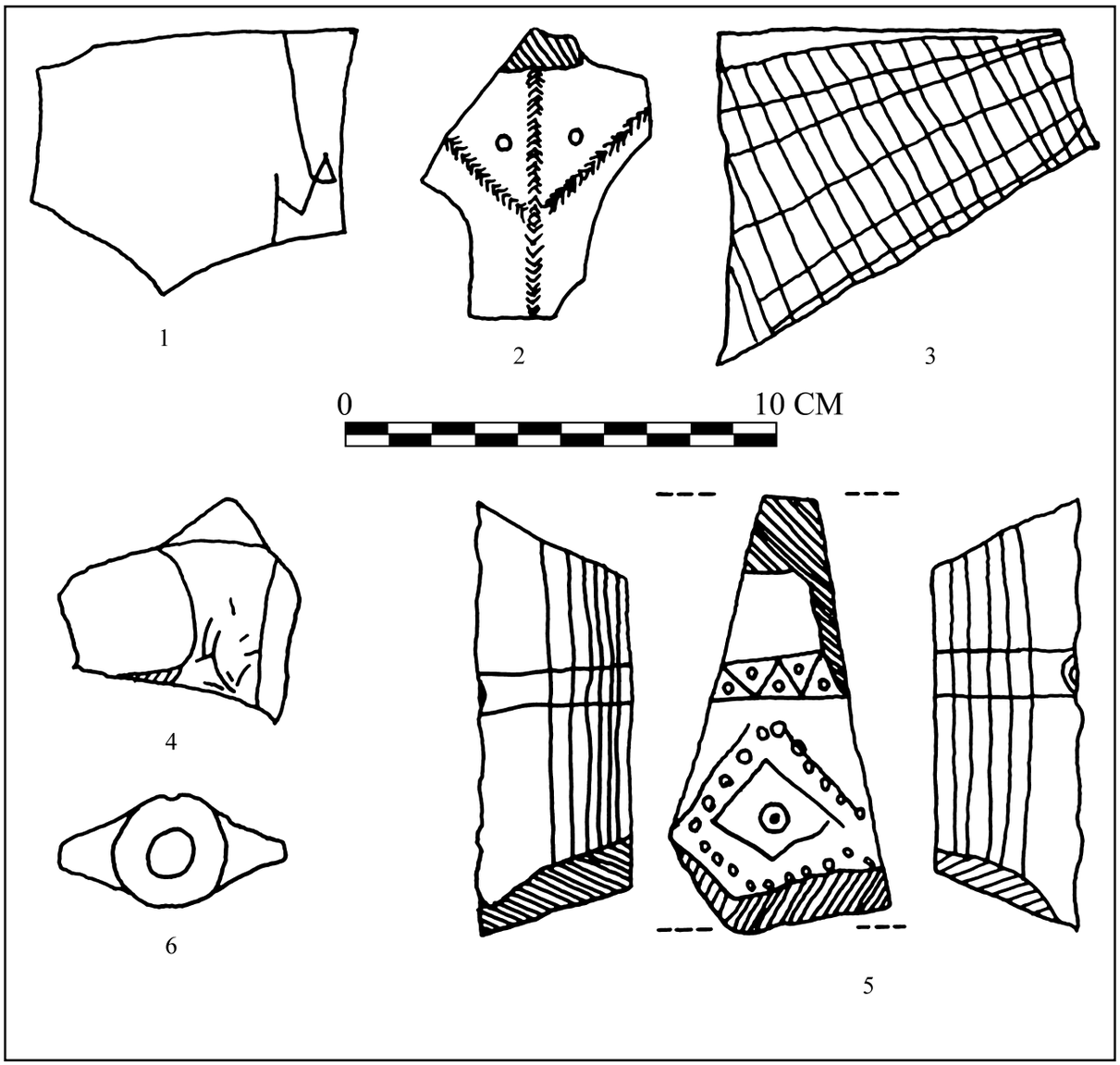
No. 2017; A.5:87A Stratum 14 (fig. 9.24:1): Black pottery, decorated pipe bowl.
No. 2233; G.4:10 (fig. 9.23:2): Black pottery, decorated pipe.

Pottery Discs

Several pieces of pottery intentionally reshaped into discs. One of the discs has a checkerboard design incised on it (fig. 9.25). Two of the discs have two holes in the center, and may have functioned as pendants. Another two discs were much smaller (Objects 1868 and 2045), and are glazed. Finally there is a group from the early Iron Age which is interesting because of the uniformity in size. The purpose of these pottery discs is not clear, but they may have been jar lids/stoppers or blanks for spindle whorls. The smaller examples, especially the two glazed ones, may have been gaming pieces.

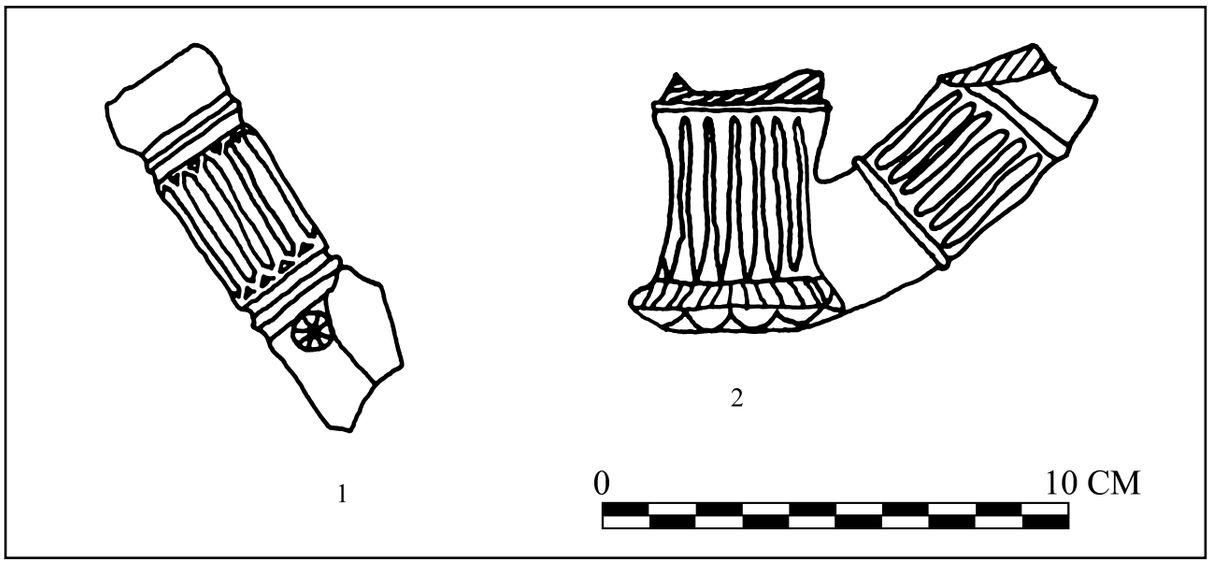
No. 241; C.4:3 Stratum 2: Sherd with two holes in middle, 2.9 cm in diameter.
No. 283; B.1:23 Strata 14-15: Sherd with two holes in middle, 6.9 cm in diameter.
No. 412; C.4:19 Stratum 3 (fig. 9.25): Sherd with incised linear design, 3.6 cm in diameter.
No. 1254; out of context: Sherd with painted bands, 3.2 cm in diameter.
No. 1868; C.6:16 Strata 2-3: Glazed sherd, 2.2 cm in diameter.
No. 2045; C.8:2 Stratum 2: Glazed sherd, 2.1 cm in diameter.
No. 2380; B.7:19 Stratum 9: Sherd, 6.1 cm in diameter.
No. 2572; C.8:26 Stratum 2: Sherd with a painted band, 1.9 cm in diameter.

Figure 9.23 Inscribed Sherds.



No. 2578; C.5:113 Stratum 3: Sherd, 4.7 cm in diameter.
No. 2579; C.5:113 Stratum 3: Sherd, 4.5 cm in diameter.
No. 2828; C.5:183 Stratum 18: Sherd, 6.6 cm in diameter.
No. 2841; C.1:139 Stratum 18: Sherd, 5.8 cm in diameter.
No. 2842; C.1:138 Stratum 18: Sherd, 4.6 cm in diameter.
No. 2846; D.4:142 Stratum 20: Sherd, 5.5 cm in diameter.
No. 2847; D.4:142 Stratum 20: Sherd, 6.1 cm in diameter.
No. 2848; D.4:142 Stratum 20: Sherd, 5.2 cm in diameter.
No. 2849; D.4:142 Stratum 20: Sherd,3.6 cm in diameter.
No. 2850; D.4:142 Stratum 20: Sherd, 6.2 cm in diameter.

Figure 9.24 Pipe Fragments.



Miscellaneous Ceramic Objects

A large piece of pottery shaped like a truncated cone with a hole in the middle (fig. 9.26:3) was found on the tell. Its use is unclear. Another piece (fig. 9.26:1) is a kiln waster, used to hold pottery while it was fired. Some glaze has dripped onto the end. Similar objects were found at Antioch (Waage 1948: fig. 92.12-13). A large, somewhat cylindrical piece of pottery which shows the impressions of four fingers at the top (fig. 9.26.2) was located in Tomb F.34. Its size and weight make it resemble a pestle, but its real function is unknown.

No. 1883; C.6:11 Stratum 2 (fig. 9.26:1): Kiln waster, glaze dripped onto one end.
No. 2732; F.34:4B (fig. 9.26:2): Unidentified ceramic object.
No. 2824; A.9:109 Stratum 14 (fig. 9.26:3): Unidentified ceramic object, shaped like truncated cone, with a hole in middle extending partway through the small end.

Bone and Ivory Objects

Numerous objects of bone and ivory were found during the excavations at Hesban. They fit into the following categories: handles, jarlids, inlay fragments, and miscellaneous worked bone objects.

Handles

Three bone handles were found at Hesban. One of these is a small circular piece of bone with a small hole for attachment (fig. 9.27:5). Another bone handle (fig. 9.27:12) is large with a hole at one end. The object has an incised design on both sides and may have been used to cover the head of a staff. The final bone handle is a hollow piece of polished bone which would have been slid over a portion of the object for which it was to serve as a handle.

Figure 9.25 Pottery Disc (Object 412).

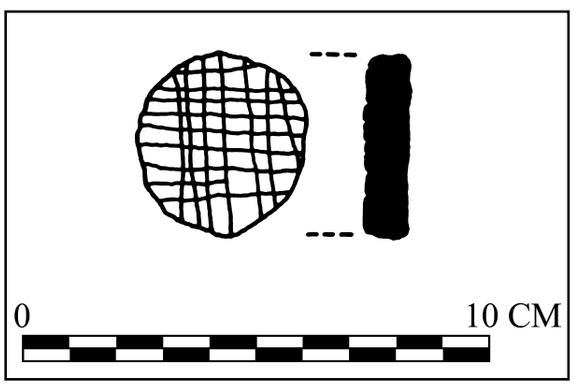
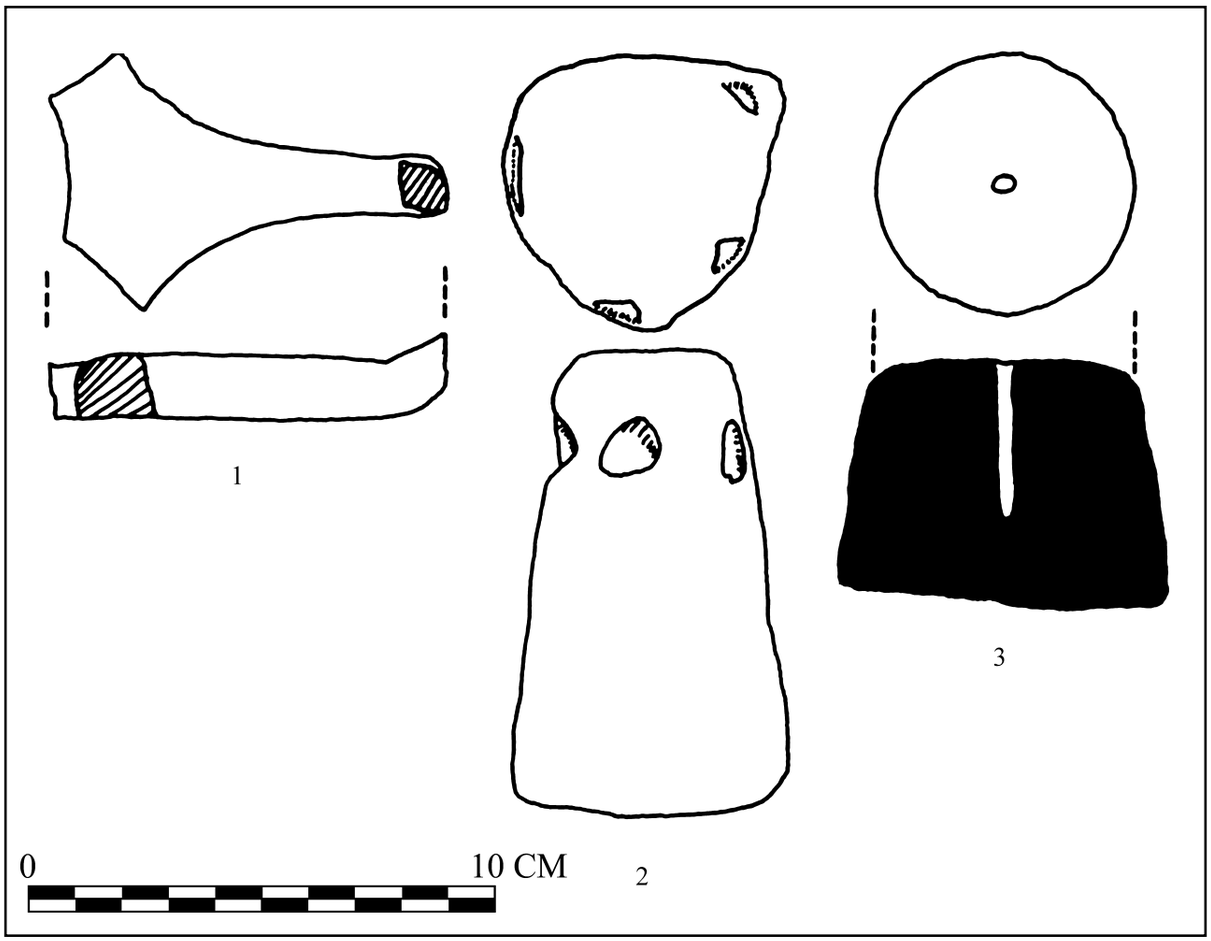


Figure 9.26 Miscellaneous Ceramic Objects.



Jar Lids

Two objects appear to have been jar lids. The first one (fig. 9.28:1) is a thin bone disc, very similar to one found at Samaria (Reisner, Fisher and Lyon 1924: 374, fig. 242.3a). The second jar lid (fig. 9.27:11) is made of very fine ivory. Both of these objects date to the Roman period.

Inlay Fragments

Numerous inlay fragments (figs. 9.27:1, 4, 7, 9, 10, and 9.28:2, 4, 6, 8) were found at Hesban. Most of them were made of ivory and came from Byzantine-period strata.

Worked Bone Objects

A number of worked bone objects were found (figs. 9.27:2, 3, 6, 8 and 9.28:3; 5, 7), but their use is unclear. The ivory disc with the flower design (fig. 9.28:5) is an exceptionally beautiful object. The small container (fig. 9.28:3) is very interesting, and has a parallel at Samaria (Reisner, Fisher and Lyon 1924: 369, fig. 240.G7a).

No. 32; A.1:1 Stratum 1 (fig. 9.27.1): Bone, inlay fragment.
No. 63; D.1:1 Strata 1-2 (fig. 9.27:2): Bone, rectangular. piece, use unclear.
No. 78; C.1:5 Stratum 3 (fig. 9.27:3): Bone, scapula fragment with a hole.

No. 102; C.1:5 Stratum 3 (fig. 9.27:4): Bone, decorated with incised dotted circles.
No. 238; C.1:6 Stratum 3 (fig. 9.27:5): Bone, part of a handle.
No. 303; C.1:6 Stratum 3 (fig. 9.27:6): Bone, fragment of a polished, worked and burnt bone.
No. 1301; D.3:21 Stratum 9 (fig. 9.27:7): Ivory, inlay fragment.
No. 1304; D.3:22 Cleanup (fig. 9.27:8): Ivory, bar-shaped piece, carved at both ends.
No. 1305; D.3:22 Cleanup (fig. 9.27:9): Ivory, inlay fragment.
No. 1306; D.3:22 Cleanup (fig. 9.27:10): Ivory, inlay fragment.
No. 1414; D.6:62 Stratum 2 (fig. 9.27:11): Ivory, jar lid, made on a lathe.
No. 1593; A.7:73 Stratum 6 (fig. 9.27:12): Bone, large bone apparently used as handle, incised decoration on each side; a hole may have been used to cover staff end.
No. 1619; F.18:8 (fig. 9.28:1): Bone, disc-shaped, possibly a jar lid.
No. 1827; B.4:205 Stratum 15 (fig. 9.28:2): Ivory, inlay fragment.
No. 1891; D.5:42 Stratum 8 (fig. 9.28:3): Bone, dome-shaped container, use unclear.
No. 2242; B.7:19 Stratum 9 (fig. 9.28:4): Ivory, inlay fragment.
No. 2275; B.2:133 Stratum 15 (fig. 9.28:5): Ivory, small disc with an incised design.
No. 2392; B.7:19 Stratum 9 (fig. 9.28:6): Ivory, inlay fragment.
No. 2618; G.13:16 (fig. 9.28:7): Bone, polished rectangular piece, with two holes at the top.
No. 2650; G.5:174: Bone, polished handle.
No. 2803; F.41:4: Bone, use unclear.
No. 2862; G.4:39 (fig. 9.28:8): Ivory, inlay fragment with incised circles.

Gaming Pieces

Gaming pieces include objects made of all of the different materials mentioned above, but because of their similar use it is important that they are discussed together. Ceramic gaming pieces include a cone-shaped marker (fig. 9.29:1), and a bird-shaped marker, both of which date to the Late Mamluk period. Some of the smaller pottery discs already described may also have been gaming pieces. Limestone gaming pieces include a small pedestal-shaped stone (fig. 9.29:2), a small cylindrical piece of limestone (fig. 9.29:6), and a crude die with markings made by small impressions which were then darkened (fig. 9.29:7). Bone gaming pieces are represented by a small, highly polished bone (fig. 9.29:3), and a small die with incised and dotted circles as markings (fig. 9.29:5). The small bone dates to the Early Mamluk period, while the bone die comes from the Byzantine period. Some dice very similar to the Hesban example were found at Samaria (Reisner, Fisher and Lyon 1924: fig. 241.16a), but date to the Late Roman period. Ivory gaming pieces included a beautiful ivory marker (fig. 9.29:4), and a very well-made die, which like the one already mentioned, had incised and dotted circles as markings.

No. 2; B.1:2 Strata 1-2 (fig. 9.29:1): Pottery, conical in shape.
No. 180; D.1:14 Stratum 3 (fig. 9.29:2): Limestone, pedestal-shaped stone.
No. 585; D.6:17 Stratum 3 (fig. 9.29:3): Bone, small, highly polished.
No. 688; F.6:3 (fig. 9.29:4): Ivory marker with a detachable top.
No. 1442; D.4:4 Stratum 9 (fig. 9.29:5): Bone, small die with dotted circles.
No. 2414; A.10:4 Strata 1-2: Pottery, bird-shaped, flat on bottom.
No. 2415; F.28:11 (fig. 9.29:6): Limestone, elongated pill-shaped stone.
No. 2504; A.10:13 Stratum 3 (fig. 9.29:7): Limestone, crude die with dark impressions as marking.
No. 2653; C.6:67 Stratum 3: Ivory, well-made die, incised dotted circles as marking.

Summary

The excavations at Hesban have yielded a number of objects made of stone, bone, clay and ivory. They represent various aspects of the material culture of the inhabitants of the site. Domestic activities are represented by mullers, querns, and millstones, all of which were used primarily to grind grain. Other domestic artifacts include mortars, pestles, rubbing stones, and stone vessels. Mercantile activities may be represented by weights. The slingstone seems to have had a military importance, though some have suggested they were multifuntional (Bienkowski 1995: 88; Homès-Fredericq 1992: 198).

Luxury items included ivory inlay, numerous types of gaming pieces, fine alabaster vessels and

Figure 9.27 Worked Bone Objects.

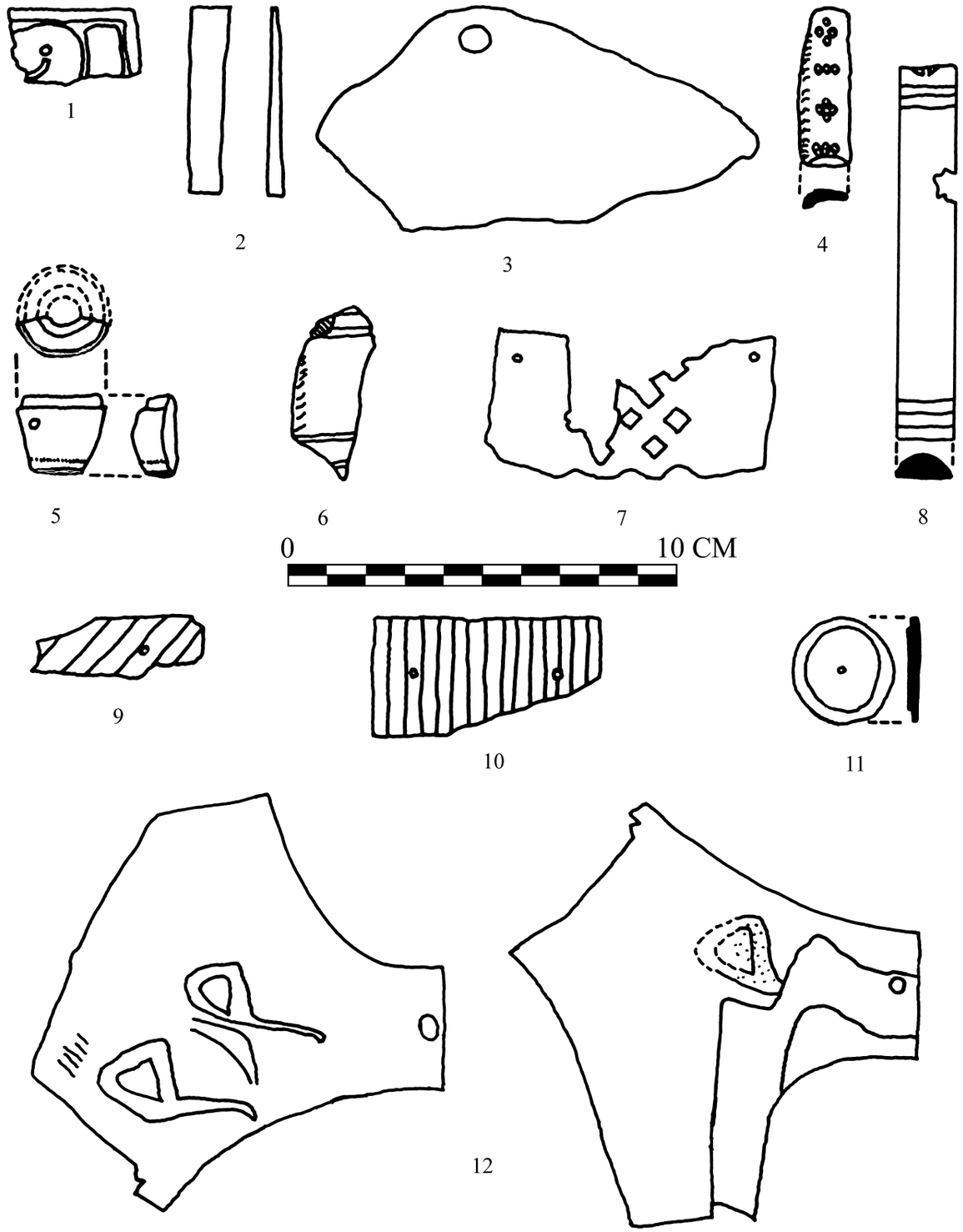
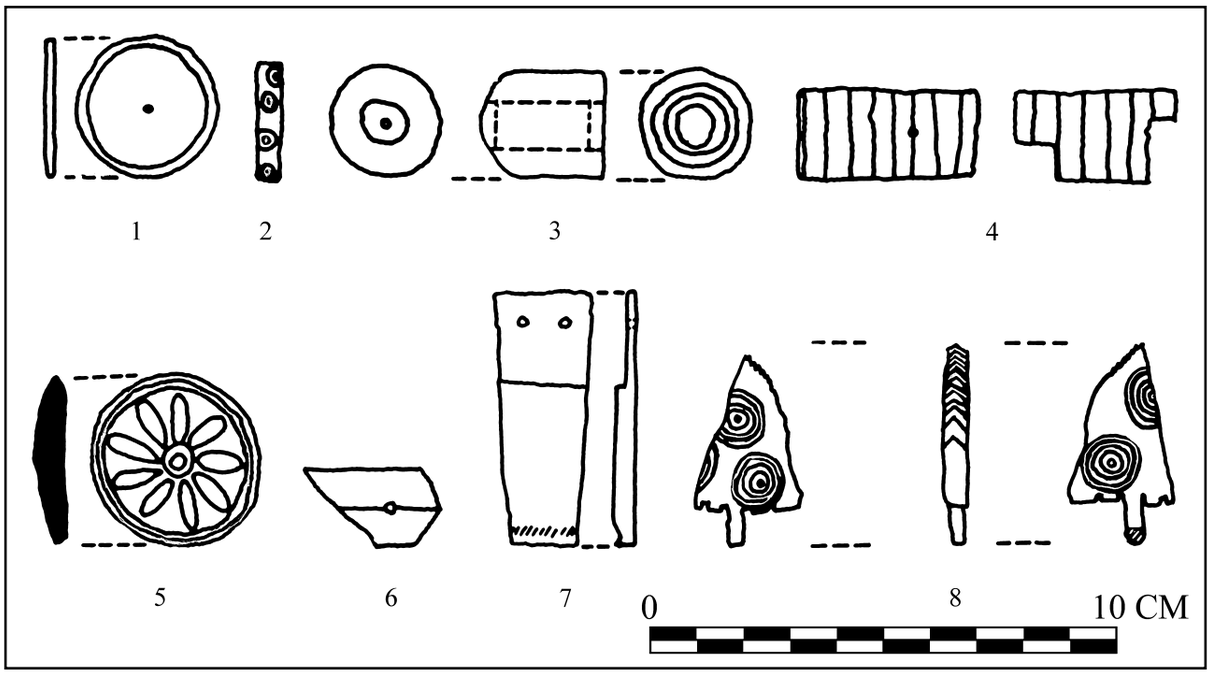
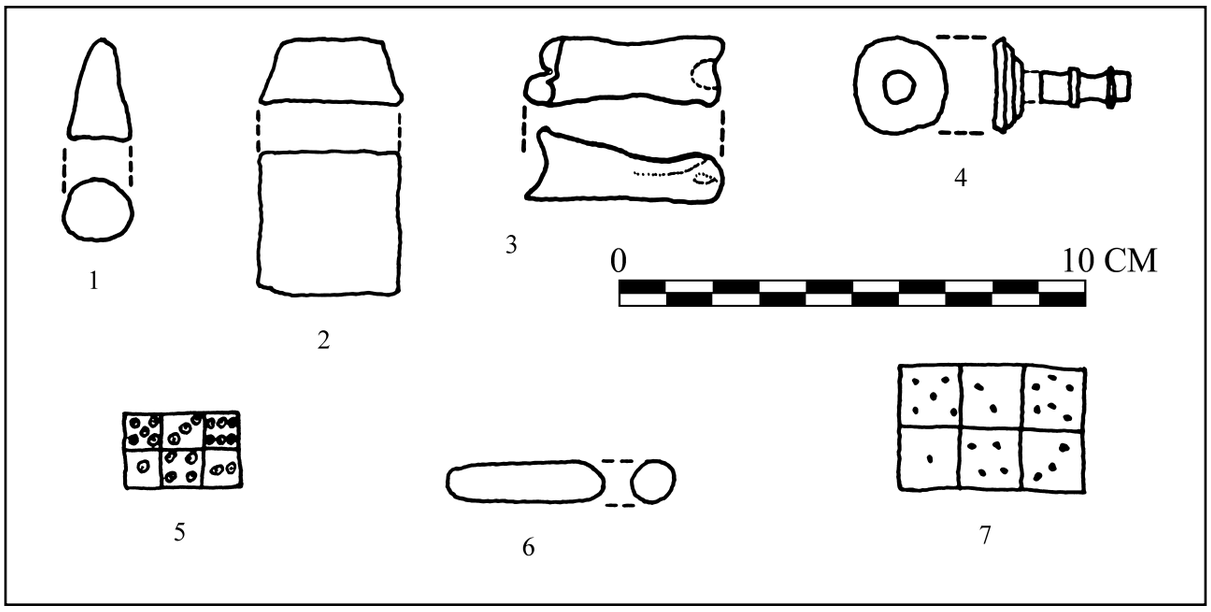


Figure 9.28 Worked Bone Objects.



marble sculpture. Architectural remains included baked clay tiles, plaster decoration, several fragments of columns and capitals, marble facing stones, and various other types of architectural dec-

Figure 9.29 Gaming Pieces.



oration. This variety testifies to the wide range of activities carried out by the inhabitants of the site during the various periods of occupation, and provides a vivid picture, along with other aspects of the material culture, of their way of life.

Note

[1]The objects included in this report were found on the tell, in the cemeteries and probes, and in one case on the regional survey.

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Chapter Ten

METALLURGICAL SAMPLES FROM TELL HESBAN

Blair D. London

Chapter Ten

Metallurgical Samples From Tell Hesban

Introduction

From the time man first walked upon the earth the available items in the environment have been used in efficacious ways. The first material utilized was stone, chiefly chert and flint. Man quickly learned that not only could these naturally occurring, abundant rocks be knapped into useful shapes, but that the application of heat would make them easier to work. Thus, the first step, the application of heat to lithic materials was taken.

With the passage of time man became intimately familiar with his environment. He discovered that certain rocks like native copper, could be hammered and heated and formed into useful tools. Native copper, or naturally occurring metallic copper, was the first metal used by ancient man. Although the date differs in various parts of the world, in general this technology began about 9000 years ago, i.e., 7000 B.C. (Wertime 1973). This was the second step, the first use of metal or native copper.

The third step in the metallurgical evolution of mankind was crucial. With increased environmental familiarity the discovery was made that certain rocks could be heated in the presence of charcoal to yield liquid metal. This is known as smelting (a process involving a chemical reaction between the ore and the fuel, usually charcoal, resulting in the production of a metal). Most smelting processes are carried out above the melting point of the metal concerned, the main exception being iron. This metal could then be cast into a shape. These rocks were copper ores found in abundance in many parts of the ancient world (especially the eastern Mediterranean region). These smelting and casting operations represented a critical step in the technological development of man. With this technology, a wide range of metals were available for use.

Ancient peoples did not have an extensive range of metals to use; indeed, of the 70 metallic elements only eight were used in antiquity. These were iron, copper, arsenic, tin, silver, gold, lead and mercury (Wheeler and Maddin 1980). But a fundamental question arises as to what ancient man found so important about metals. That is, why were metals used as extensively as they were? The answer according to Wheeler and Maddin (1980: 99-126) lies in some of the inherent properties of metals recognizable by ancient man: 1) luster and color, which basically determined the metal's value; 2) reflection of light; e.g., bronze mirrors were used for centuries; 3) acoustic properties (the pleasing sounds that could be produced from metallic instruments were unique as compared with instruments of other materials); 4) castability (various intricate forms could be produced); 5) hardness and potential sharpness for use in making tools; 6) strength and malleability (metals could easily be formed into weapons and implements); 7 welding and soldering (the joining of two metals was readily accomplished); and 8) recyclability (even broken metal objects had value since they could be reprocessed to make other implements).

Thus, in general, metals were valued for their beauty and utility. And metals had great value! This was because of the time and effort it took to produce a metal object. The thermal extraction of metals from their ores (smelting) and the subsequent stages of production were difficult and time-consuming processes in ancient times. This caused the metallic objects produced to assume an unparalleled value.

In ancient times copper and iron were the metals most extensively used for making tools, implements, weapons and the like. This chapter deals with ferrous or iron-based metallurgy, but one important nonferrous material (bronze) must be mentioned. Bronze is an alloy (a metallic substance formed by blending two or more elements, where at least one of them is a metal) of copper and tin or copper and arsenic (in ancient times). It can be produced by the smelting of an impure copper ore, that is, one that contains arsenic naturally, or by the deliberate alloying of copper and tin. Bronze was the most important metallic material of ancient man

before about 1200 B.C. (the beginning of the Iron Age). It was excellent for making many implements and weapons and was superior to iron in many ways.

Copper was probably the first metal to be extensively used by man. It was easily extracted from its ores because of the low smelting temperatures required (about 1100° C). Copper was used for many centuries until it was found that smelting the mixed ores of copper and tin produced a superior metal (bronze). Bronze is harder and stronger than the pure copper it replaced for nearly 2000 years in several cultures. Then the smelting of iron ore to produce bloomery iron was begun. It is commonly believed that iron is superior to bronze as a metal to create implements and tools, but this is not true.

The metallurgist quantifies the strength of a metal by measuring its tensile strength, which is nothing more than the amount of stress required to pull a piece of metal until it fractures. The higher the tensile strength, the stronger the metal. Pure copper has a tensile strength of about 32,000 p.s.i. and that of an 11% tin bronze is around 60,000 p.s.i. It is immediately clear that bronze is much stronger than copper. The strength of bloomery iron is about 40,000 p.s.i. and while this is somewhat stronger than copper, it is clearly inferior to bronze (Maddin, Muhly and Wheeler 1977). In practical terms this means that a bronze knife would be harder, more durable and retain its sharpness longer than an iron knife. In short, bronze was better than bloomery iron for the manufacture of weapons and tools.

Steel, not iron, actually replaced bronze as the metal from which implements were made. Steel is not iron, even though the terms are used interchangeably. Steel is actually an alloy of iron and carbon. Its mechanical properties are far superior to bronze, and steel, properly treated, can attain a tensile strength up to 2,000,000 p.s.i.

Hence, uncarburized iron is a poor substitute for bronze because it is not as strong. The ancient metalsmith recognized this and developed, over time, a "new kind of iron" to replace bronze i.e., steel.

Ancient Ferrous Metallurgy

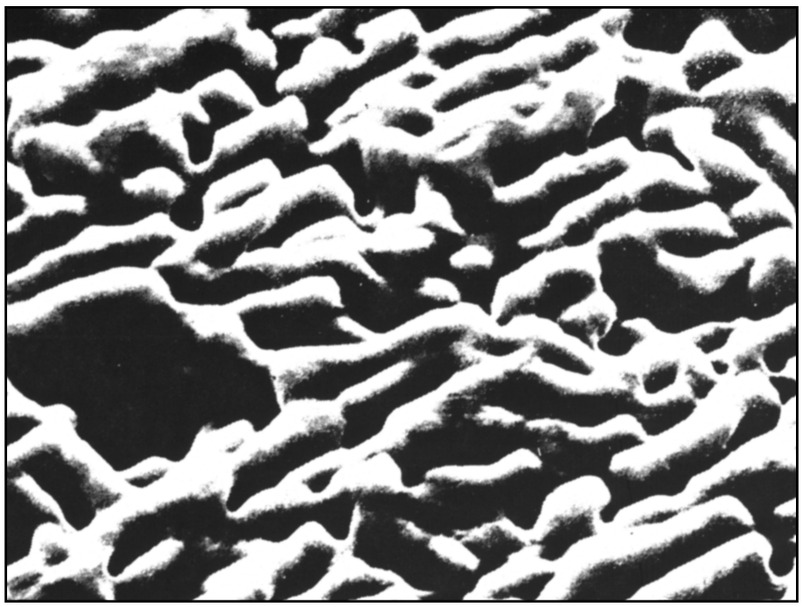
While mining copper ores (chalcopyrite, malachite, azurite), ancient peoples must have encountered iron ores. In fact, iron ores (magnetite and hematite) were probably used as fluxes for the smelting of copper. From about 5000 to 1000 B.C. copper was being produced and, more importantly, iron production techniques were being developed. Thus, when the Iron Age began around 1200 B.C., the large quantities of iron produced were a result of the 6000 years of development.

There is one important difference in the smelting of copper ores as compared to iron ores; this involves the melting points of the two metals. In ancient times the copper smelting furnace attained a maximum temperature of between 1300-1400° C (Wheeler and Maddin 1980). This was sufficient to smelt copper and obtain a liquid product since the melting point of copper is 1083° C. However, this temperature was not high enough to melt iron (melting point 1540° C), so that when copper smelting techniques were applied to iron, the iron ore was smelted in the solid state and a spongy mass of iron called bloom or bloomery iron (a product of the ancient smelting of iron ore with charcoal, resulting in a relatively pure iron containing small amounts of slag) was produced (pl. 10.1). Thus, while copper could be cast, iron could not.

The production of metallic iron or the direct smelting of iron ore to produce sponge iron is an intricate process. A furnace (fig. 10.1), usually made of stone, is constructed, into which layers of charcoal, carbon and iron ore (magnetite or hematite) are charged. Once the furnace is filled, a tuyere or clay pipe is inserted in the furnace bottom. The charge is then ignited and air is blown through the tuyere to increase the heat. Without a blast of air the temperature would be too low for smelting to take place. Chemical reactions then occur where the charcoal is oxidized, forming carbon monoxide gas which reduces the iron ore as it rises through it. Reduction occurs at about 1200° C, which is well below the melting point of iron. The smelted iron product is therefore not liquid but a spongy metallic mass (Wheeler and Maddin 1980; Maddin, Muhly and Wheeler 1977).

Bloomery iron contains a countless number of small interstices where the impurities of the iron smelting process (slag) become trapped. This slag (the nonmetallic refuse produced by smelting ore) is basically a silicate compound produced from the unwanted materials (gangue or the earthy waste material in metallic ores which with improper smelting can end up in the metal as impurities) in the iron ore. The bloom must be hot-hammered (i.e., forged) at about 1170° C to squeeze out the

Plate 10.1 The Spongy Structure of Bloomery Iron.



entrapped slag and form a continuous iron product (Maddin, Muhly and Wheeler 1977). The high temperature is needed to make the slag viscous.

These relatively complex and extremely time-consuming steps were necessary to make a fully dense, solid iron product in ancient times. It was much more involved than the smelting and casting of copper. Thus, it is quite reasonable to discover that the first iron objects produced represented extremely valuable items.

The Importance of Carburization

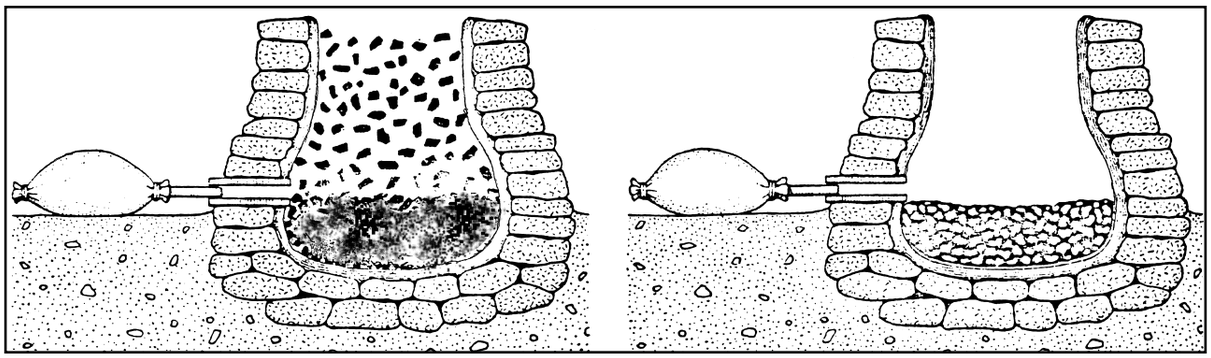
Iron, in its unalloyed form, is a relatively soft, weak metal, so that if ancient man was to use iron for tools and implements requiring strength, it had to be altered in some way. Carburization, or the process of heating bloomery iron in contact with charcoal, results in the absorption of carbon into the surface layers of the iron and converts them to steel. Thus, carburization provided the means for this technology which was probably developed to a systematic level of proficiency by 1000 B.C. in the eastern Mediterranean. This was about 200 years after the beginning of the Iron Age.

To carburize an iron object it must be heated (usually between 850-900° C) in intimate contact with charcoal for a prolonged period of time (at least several hours). The amount of carbon absorbed into the object critically depends on the temperature of the furnace (727-1150° C) and the time of exposure (8-16 hours).

Steel (an alloy of iron and carbon resulting from the carburization of iron in which the carbon content does not exceed about 1.8%) is far superior in strength and hardness to ordinary iron or bronze, making it a better material from which to manufacture implements and weapons in ancient times. However, the discovery that carbon in iron hardened it significantly was probably accidental. The smith, who was quite familiar with working iron, could have accidentally left an object for too long a time in the hot charcoal-fired forge (the charcoal fire in a blacksmith's shop used to heat iron objects before working them). An air blast is usually present to maintain a high temperature in the forge. A steeled product, which was quite different than the other (uncarburized) iron objects produced, may have resulted. At this point the smith may not have realized that carbon made the iron superior. He most likely would have surmised that the fire purified or altered the metal in some other "magical" way. His initial reasoning may have been faulty, but by about 1000 B.C. smiths in the eastern Mediterranean were intentionally carburizing on a large scale.

The metallurgical effects of carbon in iron are interesting because it is not only important that the

Figure 10.1 Iron Smelter.



carbon gets into the iron object, but also what happens to the object after it is taken from the forge or furnace that is crucial. If the steel is allowed to cool in air—a relatively slow cooling rate—the iron in combination with carbon forms a structure known as pearlite, one of the constituents of iron containing carbon in excess of about 0.02% which is slowly cooled from the austenite (a non-magnetic form of iron normally existing only at high temperatures above about 720° C, in which carbon can dissolve in up to about 1.8% at 1150° C and diffuse readily) region. Pearlite consists of minute alternate lamellae of iron (or ferrite, the low temperature, magnetic form of iron almost devoid of carbon, i.e., pure iron at room temperature) and iron carbide (or cementite, a compound or carbide of iron which is very hard and brittle and is one of the constituents of pearlite). The hardness and strength of a steel increases with greater amounts of pearlite. On the other hand, if the steel object is taken from the furnace and immediately plunged into a bath of cold water, the outer surfaces will cool quite rapidly. This causes the formation of martensite, an extremely hard microconstituent of steel. Given equal amounts of carbon, a martensitic structure is much harder and stronger than a pearlitic structure.

In addition to being very hard, martensite is also extremely brittle. To reduce this, quenched steel objects are usually reheated to a moderate temperature for a certain length of time—a process known as tempering. Tempering causes the martensite to lose its brittle quality with a concomitant reduction in hardness. Therefore, quenched-steel objects were much better than slowly cooled steel objects for use as implements and weapons in ancient times. When the smith mastered the quenching and tempering of steel, probably around 900-800 B.C., he truly had a metal for all of his needs.

The Inevitability of Corrosion

Unfortunately, iron rusts. The metallurgical study of ancient irons and steel is very difficult because many iron artifacts are badly corroded. However, evidence of pearlite can be detected in a totally corroded steel object (Knox 1963: 44-45). Through the careful microscopic study of a polished section of the artifact at very high magnification (1000 to 1500 times), the remnants of the pearlitic structure can be seen. This is because the layers of pearlite have different chemical compositions and these differences are sometimes distinguishable even in iron oxide. Hence, even totally corroded ferrous specimens can be effectively studied.

The truly detrimental effect of corrosion on steel artifacts is that the outer surfaces are attacked first. Unfortunately this is where the martensite forms in quenched steel objects. Thus, after a few thousand years of corrosion, artifacts do not retain any characteristics of their outer surfaces. This makes it extremely difficult, if not impossible, to document the first use of quenched and tempered steel. Corrosion does not totally preclude the metallurgical examination of ancient iron and steel artifacts, but it does limit the information obtainable from them.

In sum, metallurgy has a fascinating history with roots that extend far into antiquity. Through experimentation in the laboratory of the natural environment mankind discovered how to extract and utilize metals, especially iron. The Iron Age in

Table 10.1 Metallurgical Samples from Tell Hesban.

Object No.	Strata	Results
73.1329	16	Blade point Carburized
73.1547	16	Arrowhead Carburized
73.1382	15	Nail not Carburized
74.1762	15	Ax Head Carburized
71.1217	13	Arrowhead Carburized
73.1322	13	Hook not Carburized
76.2289	12	Plow point not Carburized
73.2394	10	Knife blade Carburized

the eastern Mediterranean was truly the culmination of six millennia of experimentation from rocks to steel.

Metallurgical Artifacts From Hesban

The excavations at Hesban resulted in the discovery of 448 metallic objects of iron, copper and lead. Because of this vast number, choosing exactly which artifacts to study represented a major portion of the study. The study was immediately limited to iron artifacts because the overall objective was the investigation of the development of ferrous metallurgy in the Hesban area. In addition, iron was chosen because it was probably the most important metal for the general time period, around 800 B.C. onward. The total list of iron artifacts was still quite lengthy, so a specific time frame was chosen beginning at the seventh century B.C. and extending to A.D. 408 (excavated strata 16 through 10). The artifacts corresponding to this time period were then separated according to excavated stratum and listed on cards, one card per level. A total of 55 samples spanning seven strata were now possible candidates for study. It was from this listing that the final set of artifacts was chosen.

The artifacts selected for study had to meet three basic criteria. First, they had to be representative of the culture of the time. Second, the final list had to span the entire time period of study. Third, and most important, they had to be metallurgically distinct. This meant that the artifacts had to represent a range of metallurgical technology and manufacturing techniques. Moreover, if any evidence of deliberate carburization was to be found, then artifacts that were most likely carburized and most likely not carburized had to be chosen. Taking all these factors into account, 19 artifacts were chosen as representative of the ferrous metallurgy of Tell Hesban, and of these, only eight were actually mounted and metallurgically examined (Table 10.1).

A glance at Table 10.1 shows that basically two groups of artifacts were chosen. Evidence of carburization was sought in the tools and weapons group including knife blades, a plow point, arrowheads and an ax head. The study of the functional devices and implements group—hooks and nails—was to document manufacturing techniques, if possible, but mainly to compare these objects to the first group. This comparison would hopefully indicate that any carburization seen in the first group was deliberately performed. A knife must necessarily be steel but a satisfactory hook or nail can be produced from wrought iron.

Sampling is the critical step in any archaeological metallurgy study. The artifacts chosen must meet certain specific objectives that are defined well in advance. Only in this way can a meaningful project be derived.

Metallurgical Findings

The Examination of Ancient Ferrous Metal Artifacts

The metallographic examination of ancient iron and steel artifacts is the next step. At the core of the investigation lies the search for evidence of carburized iron, i.e., steel, but this is not an easy task. The most common microstructural feature in a carburized iron is pearlite. This is usually quite distinct

Plate 10.2 Nail (Object 1382).

Plate 10.3 Hook (Object 1322).

and noticeable in a polished and etched metal sample. However, it is extremely difficult to detect relic pearlite in the oxide of a corroded steel artifact.

There are three ways that pearlite can occur in ancient samples: 1) as actual pearlite in metal; 2) as relic pearlite in oxide; and 3) as dispersed carbides in oxide. It is quite fortunate that remnants of the pearlitic structure appear in corroded steel, but they are extremely difficult to see under the microscope. High magnifications, on the order of 1000 to 1500 times with oil immersion lenses are necessary and the relic structure has extremely low contrast, blending right into the background. The dispersed carbides are easier to detect, but again require high magnifications. These factors make the microscopic examination of ancient artifacts a tedious process. However, the exciting and fascinating nature of the potential results makes the effort worthwhile.

All the artifacts used in this study are in a corroded or oxidized state, some only slightly, while others are practically crumbling. Nevertheless, it has not been possible to tell how much metal, if any, is remaining in each sample. Many of the potential artifacts were physically recognizable but some were not. The artifacts used here are generally in a "good" state of preservation, meaning they have at least retained their basic shapes.

Macroscopic Aspects

All of the eight samples mounted show extensive corrosion, meaning they are mostly oxide. Only two, the ax head (74.1762) and the plow point (76.2289), give any macroscopic evidence of remaining metal.

Documentation of Oxide Structure

Nail and Hook

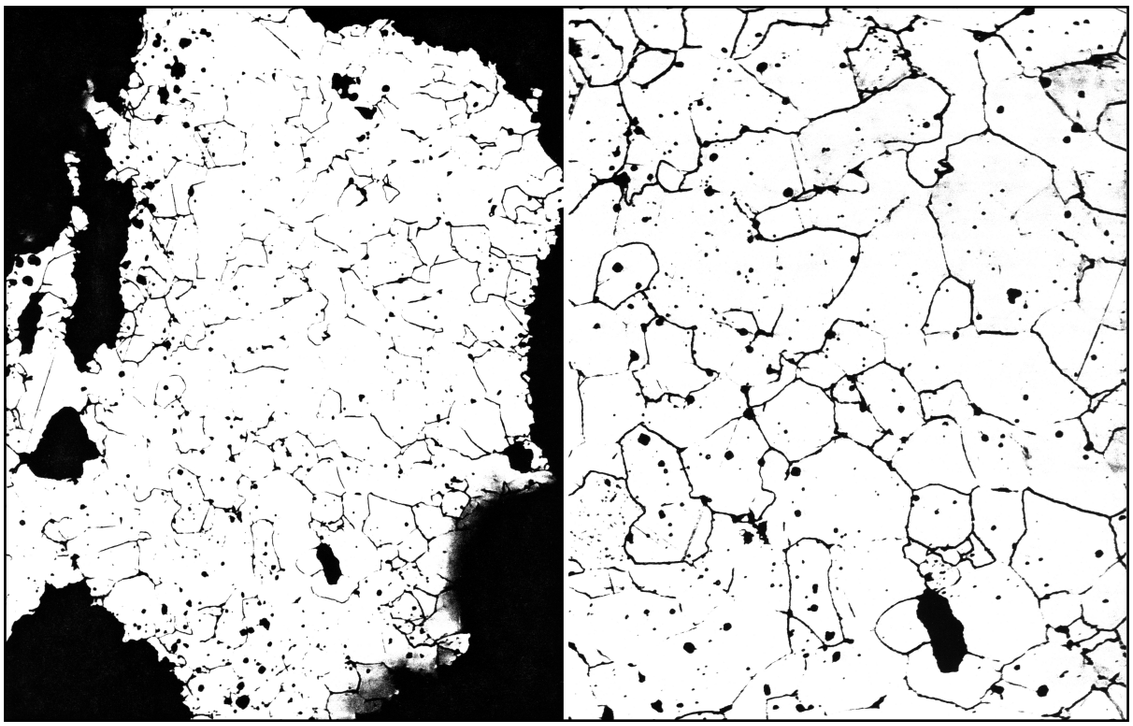
Corroded wrought iron does not leave any trace of its existence in the oxide as does steel. All that can be seen, even at the highest magnifications, is the oxide structure. Thus, the presence of wrought iron is deduced from the absence of relic pearlite. The nail (73.1382; pl. 10.2) and hook (73.1322; pl. 10.3) appear to have been, at one time, merely wrought iron. The hook is totally oxidized with no metal remaining, while the nail shows some small areas of iron. There is no evidence of pearlite in these areas or even relic pearlite in the oxide.

Plow Point

The plow point (76.2289; pl. 10.4) is one of the few samples that actually has a substantial amount of uncorroded metal. Microscopic examination indicates that the central metal core is wrought iron, not steel (pl. 10.5). The structure is that of a pure iron (no deliberately added alloying elements), more specifically ferrite. The small black regions shown in the two micrographs are areas of corrosion. The iron has very few inclusions (impurities)

Plate 10.4 Plow Point (Object 2289).

Plate 10.5 Microstructure of the Central Iron Core of the Plow Point at 70 x (left) and 133 x (right).



that are a natural result of the smelting process used in production. This attests to the skill of the ancient smith in the fabrication (probably forgoing) of this tool.

Ax Head

The study of the ax head (74.1762; pl. 10.6) proved to be the most interesting of all the artifacts examined. The object was so heavily oxidized that a small piece broke off which was suitable for mounting and polishing purposes. The polished cross section indicates a small surviving area of metal embedded in oxide which is barely visible by eye. Under the microscope this metal region is shown to be that of a pearlitic steel (pl. 10.7). The amount of pearlite is rather substantial and the carbon content is estimated to be about 0.2-0.4%. This is comparable to most of the low carbon steels used today. Another interesting feature is shown in plate 10.8, where the sample was prepared in a different manner than used for the previous figures. The individual lamella of the pearlitic structure are visible. This is important because it probably means that the ax was not forged after carburization. Worked and unworked pearlitic structures are quite different; the lamellar structure becomes somewhat spheroidal in the forged condition.

In addition to the surviving pearlite in the metal, relic pearlite in adjacent areas of the oxide is also present (pl. 10.9). Due to the contiguity of the relic and surviving pearlite, the structure of the oxidized pearlite could be substantiated. This ax head, produced nearly 2000 years ago, is an excellent example of a steel tool.

Arrowheads

Two different types of arrowheads were examined metallographically: a leaf-shaped, flat, rather large type (73.1547; pl. 10.10) and a short, triangular, three-pronged type (71.1217; pl. 10.11). The two are separated in time by about 600 years. Both of the mounted and polished sections show extensive corrosion; there are no metal areas macroscopically visible.

The pronged arrowhead (71.1217) was, at one time, steel. The microstructure is an excellent

Plate 10.6 Ax Head (Object 1762).

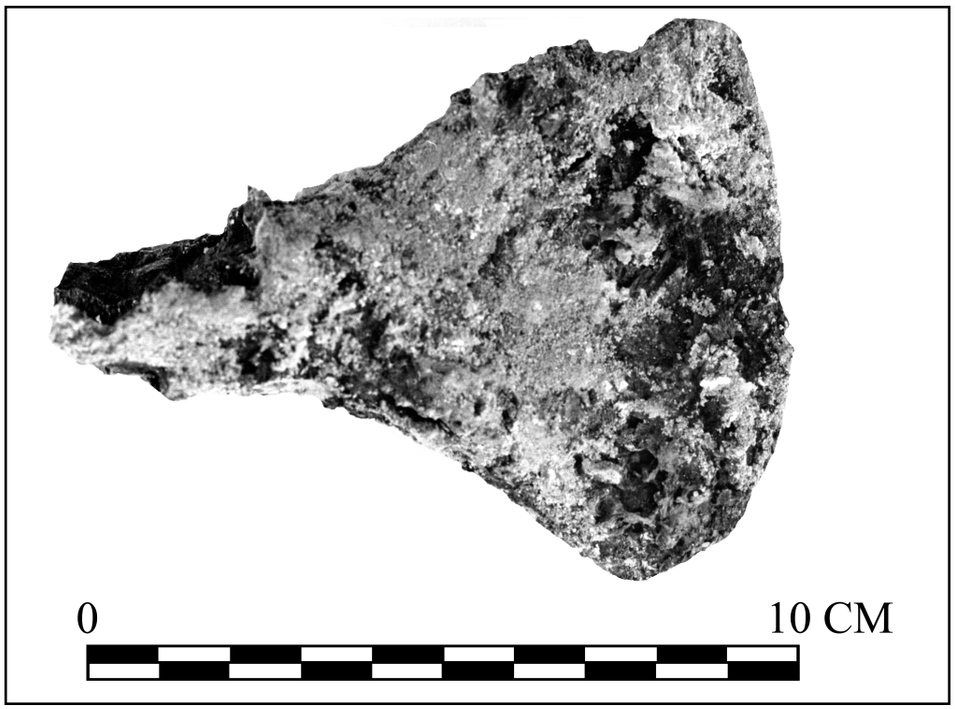


Plate 10.7 Microstructure of the Remaining Metallic Area of the Ax Head at 100 x (left) and 1000 x (right).

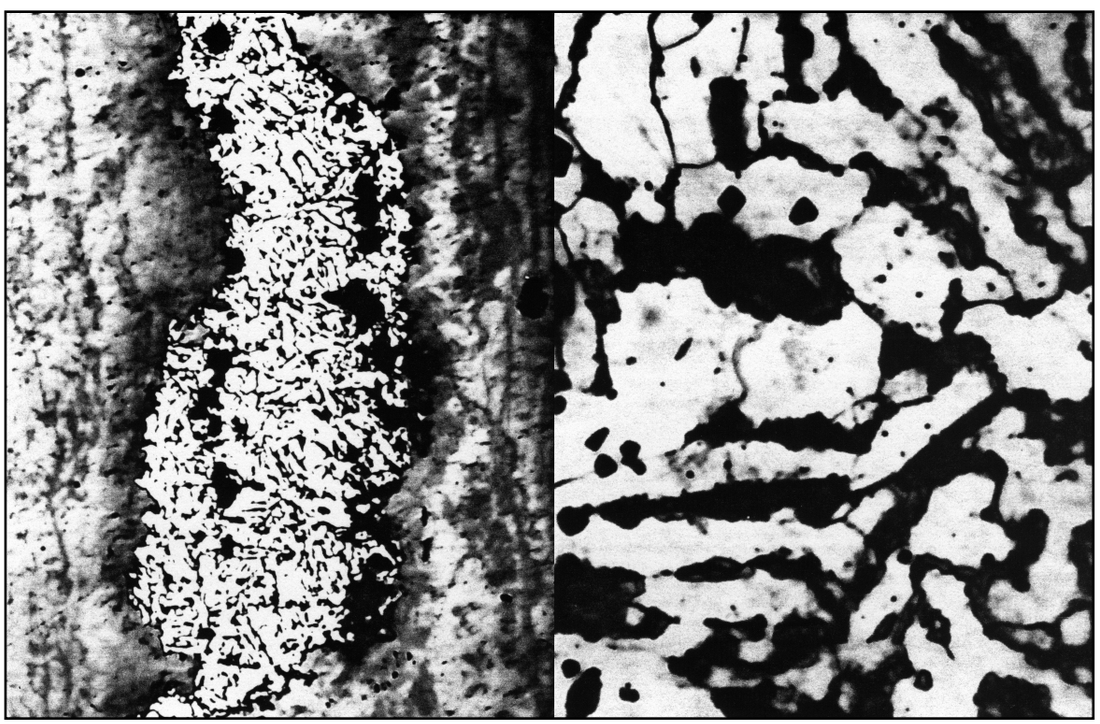


Plate 10.8 High Magnification (at 1500 x) of the Remaining Metal of the Ax Head.

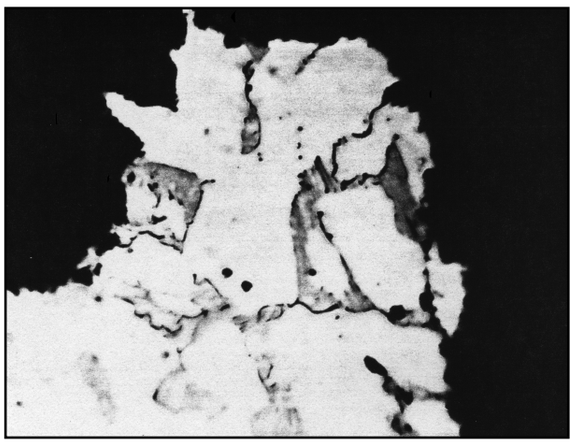
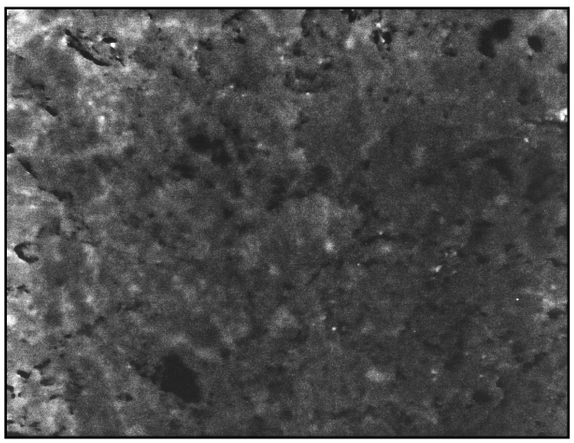


Plate 10.9 Relic Pearlite Taken from Ax Head (at 1400 x).



example of the appearance of the two forms of oxidized pearlite. Many areas of relic pearlite (pl. 10.9) are present, but, in addition, regions of dispersed carbides appear in numerous areas (pl. 10.12). These carbides were probably individual lamella in the pearlitic structure at one time (pl. 10.12b is particularly convincing in this respect). Unfortunately, since there are no substantial areas of surviving metal, little else can be derived from this artifact. However, the fact that the weapon was steel is an extremely worthwhile result.

The analysis of the Iron Age arrowhead (73.1547) was more difficult. A section of the shaft was studied, and being hollow, it oxidized from both the outer and inner surfaces. This produced an extensively corroded structure. By careful study, some areas suitable for evaluation were found. These areas showed both relic pearlite, in a relatively substantial quantity, as well as some dispersed carbides. This arrowhead, produced 600 years before Object 1217, also exhibited evidence that it was steel.

Knife Blades

The two knife blades examined represent a time span of about 1000 years. Before this study was begun it was hoped that some technological development would be seen. Both artifacts, the Iron Age (73.1329; pl. 10.13) and the Byzantine period (73.2394; pl. 10.14) blades are totally corroded with no areas of metal macroscopically visible. Under the microscope, using the highest magnification possible with oil immersion lenses, areas of relic pearlite were seen on each blade. There are no regions of dispersed carbides. In brief, both of the blades show evidence of having been steel.

There is one difference in the two knife blades that is worth noting. The pearlite in the Byzantine period sample (73.2394) is much more uniformly

Plate 10.10 Arrowhead (Object 1547).

Plate 10.11 Arrowhead (Object 1217).

distributed and occurs to a greater extent than the pearlite of the Iron Age sample (73.1329). In fact, the entire central portion of the cross section of Object 73.2394 shows the remnants of an extremely even distribution of pearlite. This was the only steeled object studied that indicated such uniformity. If the difference between the two was not caused by the effects of 1000 years of additional corrosion, then the increased experience and knowledge of the smith is evidenced in this artifact. To produce such an even structure the smith had to be intimately familiar with the carburization process. With 1000 years of development the achievement of this familiarity was indeed possible.

The Meaning of the Results

One of the main tasks of any scientist (metallurgist or archaeologist) is to synthesize the experimental observations with the pertinent background information not only to draw specific conclusions, but to ascertain the relevance of the results of the study. It is meaningless to document the presence of iron or steel without some mention of the implications.

Carburization is an extremely time-consuming process. It may take 10 to 12 hours for an iron object to absorb enough carbon to a great enough depth to produce an adequate steel layer, thereby creating a satisfactory implement or tool. However, this period of time is not idle. The forge must be kept hot during the entire carburization process, and the only way to do this is to maintain a continuous air blast. This means that the bellows must be continually operated—usually by human power—for at least 10 hours. Consequently the carburization of iron could be described as an arduous process in ancient times.

With this in mind, it would not be surprising to learn that ancient man was selective in which objects were carburized. The results of the present study seem to substantiate this assertion. The tools that needed to be carburized, the knife blades, arrowheads and ax head, were indeed found to be steel. Those that probably did not require this treatment, the hook and nail, were left as wrought iron. Thus, not only was the ancient smith saving time and effort, he was using his technology in the most rational way.

Regarding the above, one might ask why the plow point, definitely a tool in ancient times, shows

Plate 10.12 Remnants of Steel on Arrowhead with Disbursed (left) and Lamellar (right) forms at 1330 x.

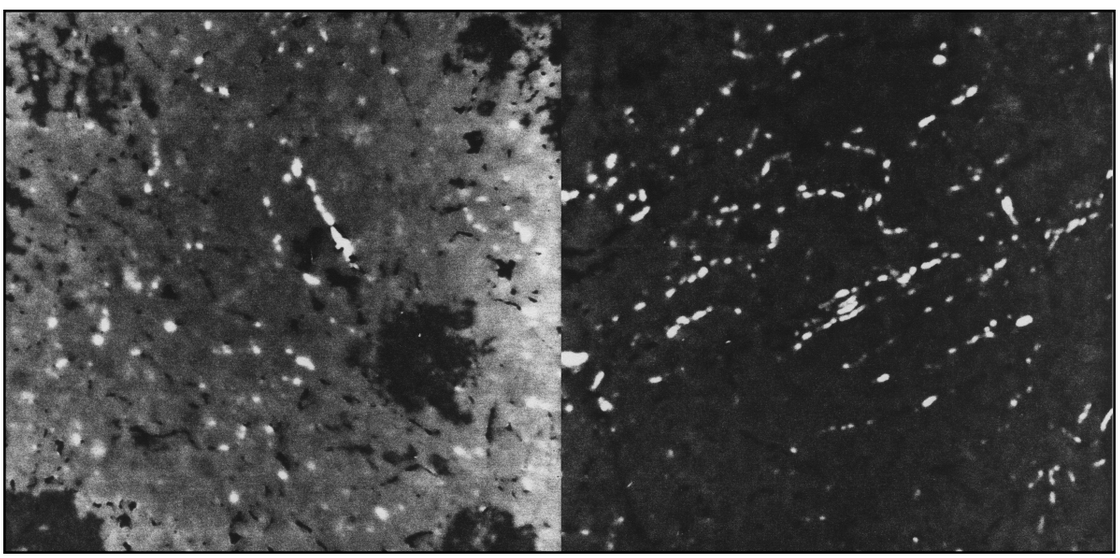
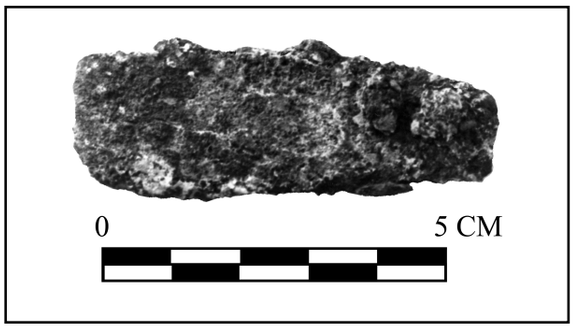


Plate 10.13 Blade Point (Object 1329).

Plate 10.14 Knife Blade (Object 2394).



no evidence of carburization. Two possibilities suggest themselves. First, the section of the plow point that was studied was cut from the larger, nonworking end of the object. While this portion would have been carburized with the rest of the tool, it is doubtful that the carbon would have diffused into the inner metal region on this part of the object. In fact, even to reach the areas of oxide surrounding the metal core would have taken an inordinate amount of time. The second possibility is its corroded state. The outer surfaces which would have contained evidence of carburization, unfortunately, are not present in the mounted section. Thus, even if the object was steeled it is doubtful whether any evidence would be seen. It is tempting to conclude that because the carburization process had already been going on for some 800 years in the region (as evidenced by the steel blade 73.1329), that the plow point must have been steel, but this is only speculation since actual evidence was not found to verify this. The plow point hence remains an enigma.

One aspect of the ferrous metallurgy at Tell Hesban that this study could not document was the possible occurrence of quenching and tempering of carburized iron objects. Since evidence of this would only occur near the outer surfaces of the implements and these are either heavily corroded or missing, investigation of any heat treatment procedures was not possible. This is indeed unfortunate because the true utility of carburized iron is only realized when it is quenched and tempered.

The selection of the artifacts examined, although few in number, reveals interesting aspects of the metallurgical technology of the people inhabiting Tell Hesban. Clearly, they had a working knowledge of the production, enhancement and use of ferrous metal objects.

Conclusions

Based on the observations and results of the metallurgical examination of the eight ferrous metal artifacts from Tell Hesban, three main conclusions are evident:

1. The Occurrence of Carburization. Of the artifacts studied, the earliest steeling occurred between the seventh and sixth centuries B.C., as verified by the steel blade point 73.1329 dated to this time period. This is to be expected, since carburizing had been practiced in the eastern Mediterranean since about the tenth century B.C. (Wheeler and Maddin 1980). Consequently, the carburization process was ongoing for nearly 300 years prior to the manufacture of the earliest artifact examined in the current study.

2. The deliberate carburization of specific iron objects to produce a superior steel product. This is verified by the fact that weapons such as knife blades (73.1329 and 73.2394); arrowheads (73.1547 and 71.2117); and an ax head (74.1762) were carburized. These objects required the superior properties of steel to be effective in their respective uses. However, the objects that did not necessarily have to be steel to perform their functions, such as the nail (73.1382); and the hook (73.1322), were left as wrought iron.

3. The attainment of a uniformly carburized steel. The earliest steeled object studied (blade point 73.1329) showed an unevenly carburized structure. Within about 770 years when the ax head (74.1762) was produced, the carburization process had become more uniform, and after another 300 more years, knife blade (73.2394) contained an

evenly distributed pearlitic structure. While the effects of corrosion may be responsible for this variation, it is believed that a more probable explanation lies in the increasing knowledge and skill of the blacksmith.

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Chapter Eleven

THE TEXTILE TOOLS FROM TELL HESBAN AND VICINITY

Elizabeth E. Platt and Paul J. Ray, Jr.

Chapter Eleven

The Textile Tools From Tell Hesban and Vicinity

Introduction

The types of textile tools discovered during the five seasons of excavation at Hesban include spindles, spindle whorls, spindel rests, weaving-pattern spatulas, needles, needle cases, loom weights, buckles, buttons, fibulae and garment pins.

Spindles

Twenty-eight spindles and spindle fragments (Table 11.1) were found at Hesban, the majority located in tomb loci. Objects 2344a and 2344b (fig. 11.1:1), found together in a Late Roman period locus of Tomb F.27, present a nice picture of a spindle with its whorl. The former is the stave of a spindle with its point and the latter a small spindle whorl in place on the graduated stave.

Two whole objects appear to belong to the same class with a lathe-turned shaft. Object 623 (Dept. of Antiquities) with a vase-shaped head (fig. 11.1:2) was found in locus 6 of Tomb F.6. It is comparable with Objects 642 (fig. 11.1:3) and 643 found in locus 11 of the same tomb. These artifacts appear to have been produced during the Byzantine period. Object 2082 (fig. 11.1:4) from Locus G.10:16 is also remarkably similar to these examples. Object 443 (fig. 11.1:5) with a less finely carved head, but of somewhat similar shape, was found in Locus C.4:35. Other parallel heads include Object 62 (fig. 11.1:6) with fine carving and Object 154 (fig. 11.1:7), both Late Islamic period in date.

The above examples have grooves, ridges, and shaping which allow the newly spun thread to twist around the top of the spindle. There would have been no wasting below the pinhead or lobe as it met the thinner stave. The diameter of the spindle at its widest point is an important identifying feature, as some of the more delicate hairpins are similar in style. The spindle shaft graduates toward the bottom and ends in a point that can be placed in a spindle rest where it turns for a seated spinster. The Hesban spindle shafts range from 1.0 to 0.6 cm at their widest diameter, with an average (or typical) stave being *ca*. 0.7 cm. Hairpins, in contrast, have diameters of from 0.23 to 0.5 cm at the widest point, typical examples being between 0.40 and 0.45 cm. On the basis of the whole spindles, the length can vary between *ca*. 10 cm to 15 cm, which is generally larger than the hairpins.

Fragments of objects (263, 2025, 2352, 644, 2716abc, 2690, 2654, 2788c, 2889) that fit one or more of the above characteristics are included here (fig. 11.1:8-16). Of particular note are Object 334b (fig. 11.2:1) with its carved decoration; Object 553 (fig. 11.2:2), whose damaged head might have been in the vase-shaped group; Object 1389 (fig. 11.2:3), which may have been pierced while tying the thread below, and using a peg to assist the newly-spun product above; and Object 2557a (fig. 11.2:4), which is a head with a single ring-and-dot design.

Object 1504a (Dept. of Antiquities; fig. 11.2:5) from tomb locus F.16:4, is enigmatic. One end is pointed and has two ridges, followed by an area that becomes wider and ends in two larger ridges. There is a hole carved in the upper part for the insertion of a peg. It could, on this basis, be the shorter segment of a spindle. The whorl or whorls would have been placed on the peg, which was then inserted in the hole of the longer section of the spindle, which is now missing. The whorl (Object 1504b) is able to fit over the point and ridges on the stave. A possible parallel was found at Megiddo (Guy 1938, fig. 175.6).

These bone and ivory spindles appear to be a special class. A more numerous type were those used with ceramic spindle whorls (see below). However, none of this type were found, leading to the suggestion that they were made of wood and have long since decayed. This type would have been much narrower in diameter and probably longer than the bone and ivory type, dealt with above, which had ring-shaped whorls and a proportionately larger hole.

Table 11.1 Spindles.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
62	C.1:4	3	bone	L 5.4 cm; dia .63	DAJ; frag.; vase head
154	D.2:4	2-3	bone	L 9.76 cm; dia .84	DAJ; frag.; vase head
263	B.1:17	14	bone	L 10 cm; dia .71	frag.; stave with point
334b	C.1: (cleanup)	?	bone	L 4 cm; dia 1.0	frag.; grey color; deeply incised, hand-carved rings
443	C.4:35	?	ivory	L 9.95 cm; dia .62	similar to vase; thick stave
553	C.4:44	?	ivory	L 5.7 cm; dia .6	frag.; beginning of head only
621	F.6:2	—	bone	L 4.5 cm; dia .63	stave frag.
623	F.6:6	—	ivory	L 14.8 cm; dia .70	DAJ; vase head
642	F.6:11	—	bone	L 7.25 cm; dia .70	frag.; vase head; identical to 643
643	F.6:11	—	bone	L 6.55 cm; dia .71	frag.; vase head; identical to 642
644	F.6:11	—	bone	L 8.33 cm	frag.; of stave (split)
1389	B.4:94	13	ivory	L 9.7 cm; dia .75	DAJ; frag.; unusual head; hole partially through stave hole
1504ab	F.16:4	—	bone	L 5.8 cm; dia 1.0	DAJ; enigmatic object; spindle & whorl peg with ring
1908	C.7:14	3	bone	L 4.5 cm; dia .8	stave frag.
2025	C.7:41	6	bone	L 4.8 cm; dia 1.0	stave frag.
2082	G.10:16	—	bone	L 6.9 cm; dia .7	vase head frag.; very close to 642 & 643
2344a	F.27:7	—	bone	L 7.9 cm; dia .65	stave frag., with whorl (b)
2344b	F.27:7	—	bone	outer dia 1.95 cm; inner dia .67 cm	whorl, with stave frag. (a)
2352	F.27:7	—	bone	L 2.3 cm; dia .6	small frag. near head
2557a	F.27:13	—	bone	L 3.8 cm; dia 1.2	head frag. with ring-and-dot design
2557b	F.27:13	—	bone	L 2.2 cm; dia .6	stave frag.
2654	G. 15:1	—	ivory	L 6.6 cm; dia .84	stave frag.
2690	F.27:24	—	bone	L 3.0 cm; dia .6	stave frag. with pin or needle frag.
2716a	F.31:8	—	bone ?	L 2.9 cm; dia 1.0	stave frag. near head
2716b	F.31:8	—	bone ?	L 3.7 cm; dia .9	head frag.
2716c	F.31:8	—	bone ?	outer dia ca. 2.45 cm; inner dia ca. 1.25 cm	whorl frag.
2788c	F.27:23	—	bone	L 3.65 cm; dia .75	stave frag. and rings
2889	G.14:26	—	bone	L 6.5 cm; dia 7.1	stave frag.; burnt black

Spindle Whorls

A total of 141 complete objects and fragments can be identified as spindle whorls (Table 11.2). Of these, twenty-eight are made of stone; 12 of bone; three of glass; and one of bronze.The remainder are ceramic. Three basic shapes can be discerned, all with flat backs. In type one, the top parallel surface is also flat. The thickness of the material makes two ridges, which are the whorl's outer edges. Type two is hemispherical, with the top surface being rounded. Type three is pyramidal. On these, the area close to the hole is the thickest part of the object, so that in profile a triangular shape is evident. The sides appear more straight than curved. Flat-shaped whorls (Objects 260, 861, 1127, 1347, 1370, 1409, 1415, 1450, 1479, 1623, 1928, 1929, 2034, 2493, 2494 and 2786; see fig. 11.3:1-16) range from 2.44-4.4 cm in diameter, 0.62-1.02 cm in thickness, with a hole of 0.26-0.92 cm. Hemispheroid-shaped whorls (Objects 294, 430, 620, 882, 978, 1048, 1073, 1106, 1413, 1596, 1791, 2005, 2076, 2351, and 2492; see fig. 11.4:1-15; and Objects 2615, 2740 and 2785; see fig. 11.5:1-3) range from 1.72-3.45 in diameter, 0.64-1.24 cm in thickness, with a hole of 0.22-0.67 cm. Pyramidal-shaped whorls (Objects 378, 615, 772, 959, 1151, 1411, 1449, 2046, and 2505; see fig. 11.5:4-12) range from 1.84-2.83 cm in diameter, 0.65-1.4 cm in thickness, with a hole of 0.35-0.73 cm. These designations are general

Figure 11.1 Spindles and Spindle Fragments.

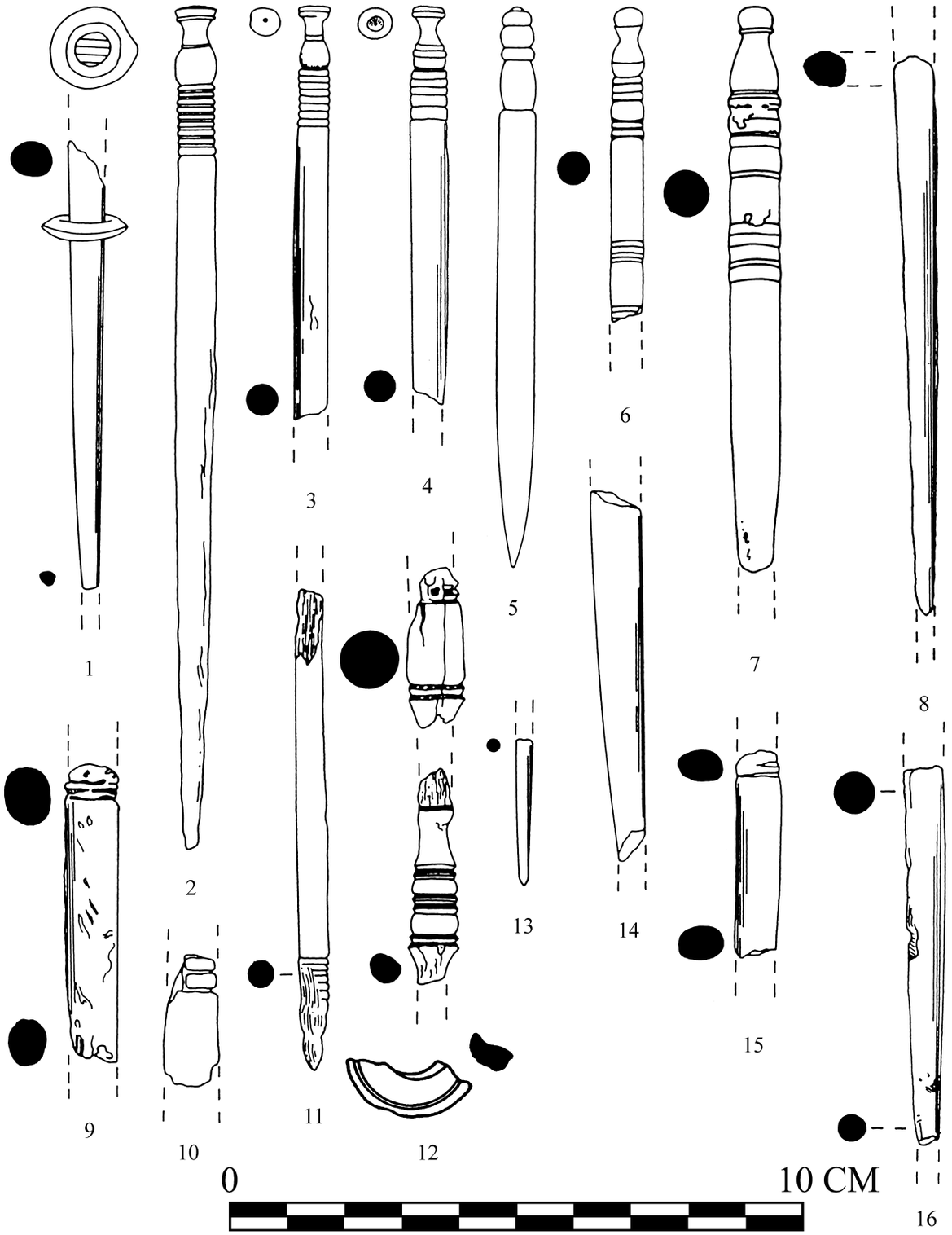
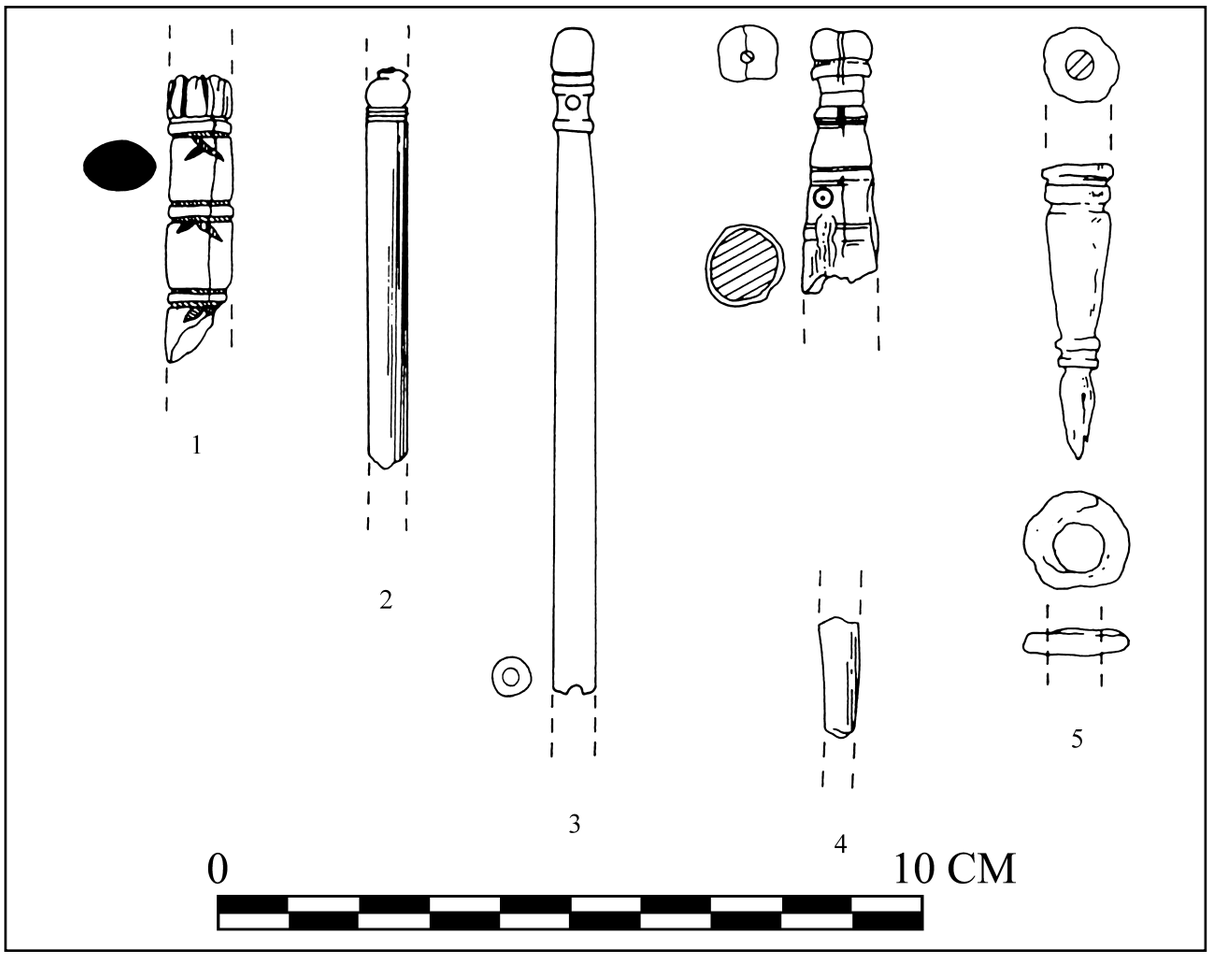


Figure 11.2 Spindles and Spindle Fragments.



guides for description purposes only, as a number of objects merge into more than one shape. A relatively large group are from the Late Roman and Islamic periods. They were found in tombs as well as in a number of loci on the mound. The care with which many were made, and the handsome decorated materials suggests that they were household treasures, perhaps gifts meant to last a lifetime.

Of the 69 potsherd-disc-type whorls, a large percentage are from the same loci, mostly in the debris layers in Square C.1, from Stratum 18. From D.4 there were four whorls from Loci 138 and 142 (Stratum 20), all Iron Age in date. These relatively thick disc-shaped whorls were evidently used to spin some type of thick thread, possibly goat's hair for use in the making of tents (D. Irvin, personal communication). Whorls made of reused potsherds (Objects 1, 2091, 2709, 2766 and 2845; see fig. 11.6:1-5) range from .9-2.4 cm in diameter, 2.33-9.2 cm in thickness, with a hole of .26-.8 cm.

The spindles with which the above whorls were used were probably made of wood, long since disintegrated. They could have been slender sticks with carved ends or more ornate pieces with two sections and a peg. In general, with flat backs, spindle whorls could be used two at a time. At Megiddo (Guy 1938: fig. 175) there is an example of a spindle with two hemispheroid whorls placed back-to-back. It is obvious that fine thread, probably flax, was spun with these delicate instruments.

Davidson, in her work on Corinth (1952), believes a number of these objects are garment buttons. The single-hole fastener would have a loop and bar for attachment. A few of the Corinthian

Table 11.2 Spindle Whorls.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
1	C.1:1	2	clay	dia 6.33; th 1.05; hole .3	potsherd; black painted decoration; crudely fashioned; circular; perforated
69	C.1:1	2	glass		-
174	C.2:7	3	bone	L 3.72; W 2.05; th 2.05; hole 4 cm	sheep/goat astragalus bone drilled with center hole; color: 2.5 Y 7/4 "pale yellow"
260	B.1:44	15/16	clay	dia 2.73; th .90; hole .26	flat shape; color: N4 "dark gray"
294	C.1:6	3	ivory ?	dia ca. 2.8; th 1.2; hole .45	hemispherical shape; color: 2.5 Y 8/4 "pale yellow"
378	B.4:1	2	basalt	dia 3.03; th 1.2; hole .36	pyramidal shape; color: N/3 "very dark gray"
430	D.6:15	3	alabaster	dia 2.15; th ca. .67; hole .25	hemispherical top; concave back; small design; color: 5 YR 7 + 6/4 "pink-brown"
615	F.6:2	—	serpentine	dia 2.5; th .85; hole .37	DAJ; pyramidal; incised rings; color: 5 GY 4/1 "dark greenish gray"
620	F.6:2	—	bone	dia 3.05; th .75; hole .36	hemispheroid; traces of incised rings; crack visible on back; color: 10 YR 8/3 "very pale brown"
772	B.3:18	9	basalt	dia 2.85; th 1.16; hole .40	pyramidal; color: 2.5/0 "black" and 5 G 4/1 "dark greenish gray"
783	C.4:53	6	ivory ?	dia 2.29; th .50; hole .38	frags.; pyramidal ?; both sides ridged with decoration; top has thick edge; color: 10 YR 8/4
861	C.4:53	6	limestone	dia 3.14; th 1.05; hole .70	irregular shape of natural stone; back almost flat; color: 5 YR 8/4 "pink" and 10 YR 8/2 "white"
882	C.1:38	14 ?	clay	dia 2.84; th 1.14; hole .53	hemispheroid; slight ridge at edge; color: N/6 "gray"
959	F.8:6	—	basalt	dia 1.84; th .65; hole .35	pyramidal; incised ring near edge; color: N/3 "very dark gray"
978	C.1:38	14 ?	onyx	dia 1.72; th .89; hole .22	hemispheroid; rough back & edge; perforation is very small; striated with darker gray NB/8 "white"
1039	D.6:33H	4	clay	6.13 x 6.55 x 2.56	-
1048	C.5:5	3	basalt	dia 2.23; th .74; hole .47	hemispheroid; color: 2.5 Y 4/4 "olive brown"
1073	F.10:6	—	basalt	dia 2.63; th .86; hole .44	hemispheroid; color: N/5 "gray" with tan flecks
1106	C.1:25	12	glass	dia 2.35; th .85; hole .36	hemispheroid; many rings wound on rod; flattened; weathered N/4 "gray"
1127	B.4:59	13	bone	dia 2.44; th .62; hole .43	DAJ; flat shape; color: 10 YR 8/6 "pale yellow," decorated with 2 rings and 10 ring-and-dots
1151	D.6:33I	4	basalt	dia 2.06; th .71; hole .37	slightly pyramidal; color: 4/2 "dark grayish brown"
1347	D.4:1	2	clay	dia 3.4; th 1.1; hole .71	flat shape; cut from potsherd; smooth orange slip on one side and white on the other; stripes in center; basic color: ca. 10 YR 7/3
1370	C.3:8	3	basalt	dia 2.8; th .8; hole .56	flat shape; color: 10 YR 3/2 "very dark grayish brown"
1401	B.2:83	15/16	clay	L 6.6	-
1409	C.1:94	bedrock	limestone	dia 2.97; th 1.6; hole .87	flat shape; ridge irregularly carved outside; smooth round hole; color: 8/1 "white"
1411	G.1:18	—	granite	dia 2.83; th 1.28; hole .51	DAJ; pyramidal; smooth; no decoration; color: 5G 6/1 "greenish gray"
1413	B.4:122	13	basalt	dia 2.82; th 1.0; hole .63	hemispheroid; smooth; no decoration; color: 4/1 "dark gray" with lighter flecks
1415	D.2:28	8	serpentine	dia 2.9; th .70; hole .64	flat ridge; smooth hole; slightly irregular edge; color: 5G 4/1 "dark greenish gray" and flecks
1449	D.2:23	13	granite	dia 2.39; th 1.31; hole .57	DAJ; pyramidal; flat side has ridge .53 cm from hole; color: N/4 "med. dark gray" and flecks
1450	D.6:2	2-3	limestone	dia 3.54; th .78; hole .51	frag.; flat; irregularly carved; smooth hole; color: 5Y 5/1 "gray"

Table 11.2, *continued*. Spindle Whorls.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
1456	G.1:25	—	serpentine	dia 2.85; th 1.4; hole .47	pronounced pyramidal shape incised rings near hole and edge ridge around bottom edge; color: 5 GY 5/1 "dark greenish gray"
1479	D.4:17	3	clay	dia 3.7; th .95; hole .56	flat potsherd; white slip on one side; edge irregular; smooth hole
1596a	F.18:21	—	serpentine	dia 3.0	-
1596b	F.18:21	—	serpentine	dia 2.8	-
1596c	F.18:21	—	serpentine	dia 3.07; th 1.02; hole .59	DAJ; flat top; sloping sides; color: 5 GY 4/1 "dark greenish gray"
1623	C.1:96B	21	bone	dia 1.5	raised area in center near perforation; single ring incised around edge
1671	B.4:186	14	clay	dia 5.0; H 3.8; hole .45	ovoid
1709	D.3:57C	14	clay	dia 4.4; th 1.0; hole .92	flat shape? smooth; depression on top center
1791	C.5:62	3	stone	dia 3.0; th 1.24; hole .67	hemispheroid; milled ridges cross-wise on both sides; small ring on back around hole; color: 5Y 4/1 "gray"
1928	C.7:36	3	limestone	dia 2.6; th 1.0; hole .5	flat, irregular shape, follows stone; smooth hole; color: 10 YR 8/4 "pale brown" and gray
1929	C.7:36	3	limestone	dia 2.23; th .80; hole .85	frag.; flat, irregular shape, follows stone; smooth hole; color: N/7 "light gray"
1932	B.2:123	cleanup	clay	dia 4.9; H 3.5; hole .7	dents on one side
2005	D.3:57E	14	glass	dia 2.35; th 1.06; hole .45	hemispheroid; wound on rod; back flattened; color: originally 2.5 Y 5/6 translucent "lt. olive brown" pitted by weathered ridges on back
2011	D.1:86	13	clay	dia 5.8; th 1.2; W 3.1	frag.
2034	B.2:124	15/16	bronze?	dia 2.45; th .94; hole .49	flat shape; corroded
2046	C.7:16	3		dia 2.40; th 1.06; hole .6	pyramidal; some incise marks on top; color: 2.5 Y 3/2 "dark grayish brown"
2076	G.10:17	—	serpentine	dia 2.6; th .76; hole .40	hemispheroid; one incised line around edge; color: 2.5 Y 3/2 "very dark grayish brown" with flecks
2091	D.4:62	3	clay	dia 5.8; th 1.5; hole .35	circular potsherd
2244	B.7:19	9	clay	dia 6.5; th 2.1; W 3.5	-
2261	C.1:123B	17	clay	dia 7.2; th 1.6; W 4.1	frag.
2351	D.4:94	12	glass	dia 2.8; th 1.0; hole .39	hemispheroid; wound on rod; back flattened; color: originally 2.5 Y 5/4 translucent "lt. olive brown;" some weathering; ridges on back
2400	C.1:123B	17	clay	dia 6.1; th 1.4; W 4.0	frag.
2401	C.1:125	14	clay	dia 6.6; th 1.4; hole .3	frag.
2402	C.1:123B	17	clay	dia 6.7; th 1.5; W 4.0	frag.
2403	C.1:123B	17	clay	dia 6.1; th 1.6; hole .7	frag.
2404	C.1:123B	17	clay	dia 7.8; th 1.8; W 4.3	frag.
2405	C.1:123B	17	clay	dia 5.8; th 2.0; hole 1.9	whole, but cracked
2430	C.6:2	3	clay	dia 6.3; th 1.3; hole .7	almost square in shape
2431	C.4:124	18	clay	dia 6.6; th 1.4; W 3.9	frag.
2432	C.4:124	18	clay	dia 5.1; th 1.6; W 3.2	frag.
2433	C.4:124	18	clay	dia 6.0; th 2.3; W 4.0	frag.
2434	C.4:124	18	clay	dia 8.3; th 2.1; W 5.3	frag.
2435	C.1:124	18	clay	dia 4.1; th 1.2; hole .4	circular potsherd; size of whorl
2436	C.1:125	14	clay	dia 5.9; th 1.4; W 3.5	frag.
2454	D.2:80D	14	clay	dia 7.0; th 1.3; W 3.8	frag.
2481	C.1:123B	17	clay	dia 7.5; th 2.4; W 3.9	frag.

Table 11.2, *continued*. Spindle Whorls.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
2482	C.1:124	18	clay	dia 6.8; th 1.4; hole .7	frag.
2483	C.1:123B	17	clay	dia 8.5; th 1.3; W 4.5	frag.
2484	C.1:127	18	clay	dia 6.8; th 1.5; W 3.9	frag.
2492	F.27:9	—	hematite	dia 2.75; th .85; hole .34	hemispheroid; incised rings near hole and edge; color: 2.5 Y 3/2 "very dark grayish brown"
2493	G.11:19B	—	bone	dia 2.73; th .56; hole .26	frag.; flat ridge on dge; no decoration; color: 2.5 Y 8/2 "pale yellow"
2494	F.31:8	—	bone	dia ca. 2.33; th ca. .43; hole .91	frag.; top flattened; outside edge has two incised rings; back is concave with raised edges; cf. 1504 and 2344; color: 10 YR 8/3 "very pale brown"
2501	C.1:126	18	clay	dia 5.1; th 1.6; W .29	frag.
2505	F.31:8	—	hematite	dia 2.06; th .80; hole .32	pyramidal; incised rings near hole and ridge on edge; color: N2.5 with flecks
2511	C.1:126	18	clay	dia 5.4; th 1.4; W 2.5	frag.
2512	C.1:124	18	clay	dia 5.0; th 1.4; W 3.2	frag.
2513	C.1:127	18	clay	dia 6.8; th 1.1; W 4.7	frag.
2515	F.31:8	—	serpentine	dia 2.05; th .64; hole .32	hemispheroid; single incised ring around edge; color: 5G 4/1 "dark greenish gray"
2536	F.31:8	—	serpentine	dia 2.2; th .61; hole .31	hemispheroid; two incised rings around hole; one around edge; color: 5GY 5/1 "greenish gray"
2537	F.31:8	—	bone	dia 2.44; th .90; hole .46	hemispheroid; two frags. matched; cf. 2740; double rings incised near hole and at outer edge; color: 10 YR 8/3 "very pale brown"
2573	C.1:129	18	clay	dia 4.4; th 1.1; W 3.0	frag.
2574	C.1:126	18	clay	dia 6.4; th 2.0; W 4.1	frag.
2575	C.1:126	18	clay	dia 5.3; th 1.1; W 2.8	frag.
2576	C.1:131	18	clay	dia 5.0; th 1.5; hole .7	frag.
2577	C.1:131	18	clay	dia 5.2; th 1.4; hole .7	frag.
2615	C.8:9	3	bone	dia 3.04; th 1.0; hole .51	hemispheroid; decorated with incised ring near hole and 6 evenly spaced ring-and-dots; color: 10 YR 8/2 "very pale brown"
2701	C.1:131	18	clay	dia 9.2; th 1.6; W 5.4	frag.
2702	C.1:133	18	clay	dia 7.5; th 1.6; W 4.0	frag.
2703	C.1:133	18	clay	dia 6.6; th 2.2; W 3.6	frag.
2704	C.5:165	13	clay	dia 4.0; th 1.1; W 2.7	frag.
2705	C.1:133	18	clay	dia 6.4; th 2.2; W 4.5	frag.
2706	C.1:133	18	clay	dia 5.1; th 1.3; W 3.5	frag.
2707	C.1:133	18	clay	dia 4.8; th 1.4; W 3.9	frag.
2708	C.1:131	18	clay	dia 5.2; th .9; W 3.0; hole .8	frag.
2709	C.1:133	18	clay	dia 4.3; th .9; hole .65	circular potsherd; size of whorl
2710	C.1:133	18	clay	dia 6.8; th 1.0; W 3.8	frag.
2711	C.1:135	18	clay	dia 7.8; th 1.8; W 4.3	frag.
2716c	F.31:8	—	bone	dia ca. 2.45; th .42; hole 1.25	ring type
2721	G.13:4	—	clay	3.9 x 1.1	frag.
2723	C.1:131	18	clay	dia 6.0; th 2.0; hole .4	whole
2724	C.1:133	18	clay	dia 5.4; th 2.4; W 2.8	frag.
2725	C.1:136	18	clay	dia 5.7; th 1.1; W 4.0	frag.
2726	C.1:136	18	clay	dia 6.2; th 1.5; W 4.8	frag.
2727	C.1:136	18	clay	dia 8.7; th 1.7; W 4.4	frag.
2728	C.1:131	18	clay	dia 6.5; th 1.2; W 4.5	frag.
2730	C.1:134	18	clay	dia 7.2; th 2.1; W 3.7	frag.

Table 11.2, *continued*. Spindle Whorls.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
2731	G.4:22	—	clay	3.5 x 3.4 x 1.0	frag.
2740	F.31:8	—	bone	dia 2.44; th .90; hole .46	hemispheroid; two frags.; matched; cf. 2537; double rings incised near hole and at outer edge; color: 10 YR 8/3 "very pale brown"
2766	C.1:133	18	clay	dia 6.8; th 2.0; hole .66	circular potsherd; perforation not in center
2767	C.1:133	18	clay	dia 8.7 ; th 1.8; W 4.4	frag.
2768	C.1:137	18	clay	dia 5.9 ; th 1.5; W 3.6	frag.
2769	C.8:23	3	clay	dia 4.8; th .9; W 3.0	frag.
2770	C.1:133	18	clay	dia 7.1; th 1.4; W 5.3	frag.
2771	C.1:136	18	clay	dia 9.1; th 4.5; W 2.0	frag.
2772	C.1:137	18	clay	dia 7.4; th 2.4; W 4.5	frag.
2785	F.27:23	—	bone	dia 3.45; th .7; hole .49	flat, hemispheroid; weathered ring-and-dot pattern; black paint; incised ring near center and outside edge; color: 8/2 "white"
2786	F.27:23	—	bone	dia 3.3; th 6.2; hole .51	flat; outer edge has single incised line; weathered outer color: 10 YR 5/3 "brown"
2796	D.4:138	20	clay	dia 7.3 ; th 1.1; W 3.6	frag.
2797	D.4:138	20	clay	dia 8.4; th 1.8; W 4.7	frag.
2829	C.9:38	2	clay	dia 10.5; th 2.0; W 7.5; hole 1.6	frag.
2830	C.1:139	18	clay	dia 7.5; th 2.1; W 3.7	frag.
2831	C.1:138	18	clay	dia 5.1; th 1.5; W 2.8	frag.
2832	C.1:139	18	clay	dia 8.0; th 1.7; W 4.0	frag.
2833	C.1:139	18	clay	dia 7.8; th 1.7; W 3.9	frag.
2834	C.1:138	18	clay	dia 6.2; th 1.5; W 3.5	frag.
2835	C.1:139	18	clay	dia 4.8; th 1.1; W 3.1	frag.
2836	C.1:138	18	clay	dia 6.7; th 1.7; W 4.4; hole .7	frag.
2837	C.1:138	18	clay	dia 6.4; th 1.6; W 4.3	frag.
2838	C.1:138	18	clay	dia 7.8; th 1.6; W 5.0	frag.
2839	C.1:138	18	clay	dia 4.1; th 3.0; W 1.4	frag.
2840	C.1:138	18	clay	dia 4.9; th 1.7; W 2.7	frag.
2845	D.4:142	20	clay	dia 5.6; th 1.0; hole .85	circular potsherd
2927	D.4:142	20	clay	dia 5.5; th .9; hole .8	whole
2928	C.1:143	21	clay	dia 7.3; th 1.7; W 5.6	frag.
2929	C.1:143	21	clay	dia 8.0; th 1.6; W 4.3	frag.
2930	C.1:141	18	clay	dia 5.7; th 1.5; W 3.5	frag.
2931	C.1:139	18	clay	dia 6.5; th 1.7; W 4.4	frag.
2932	C.1:138	18	clay	dia 6.6; th 1.9; W 3.4	frag.
2933	C.5:201	9	clay	dia 7.4; th 1.6; W 3.5	frag.
2934	C.1:139	18	clay	dia 5.6; th 1.4; W 3.1	frag.
2935	C.1:142	21	clay	dia 4.6; th 1.2; W 3.2	frag.

examples are from the Early Roman period, but "nine-tenths" of the objects of this category were Byzantine period in date (1952: 296). Surprisingly, she found no whorls in graves. However, other similar stone and bone objects from Late Bronze II and early Iron Age I and II confirm their identification as spindle whorls. She notes that the bone whorls were turned on a lathe, and that many were dyed red or pink. Several Corinthian objects (Nos. 2550-2572) with ring-and-dot pattern (1952: 201, pl. 123; 301; particularly Object 2554) compare well with Hesban Objects 1127 and 2615.

Figure 11.3 Flat-shaped Spindle Whorls.

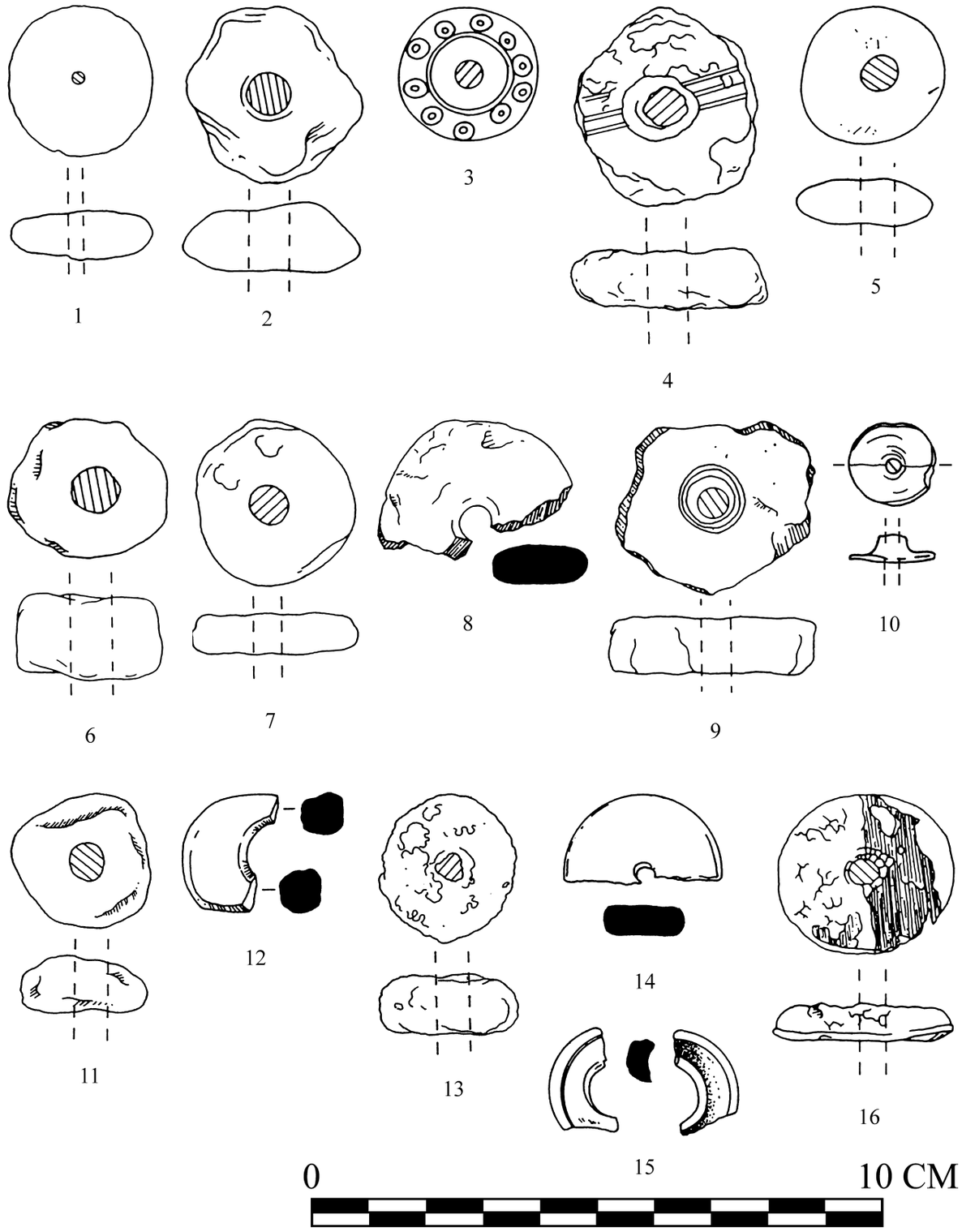


Figure 11.4 Hemispheroid-shaped Spindle Whorls.

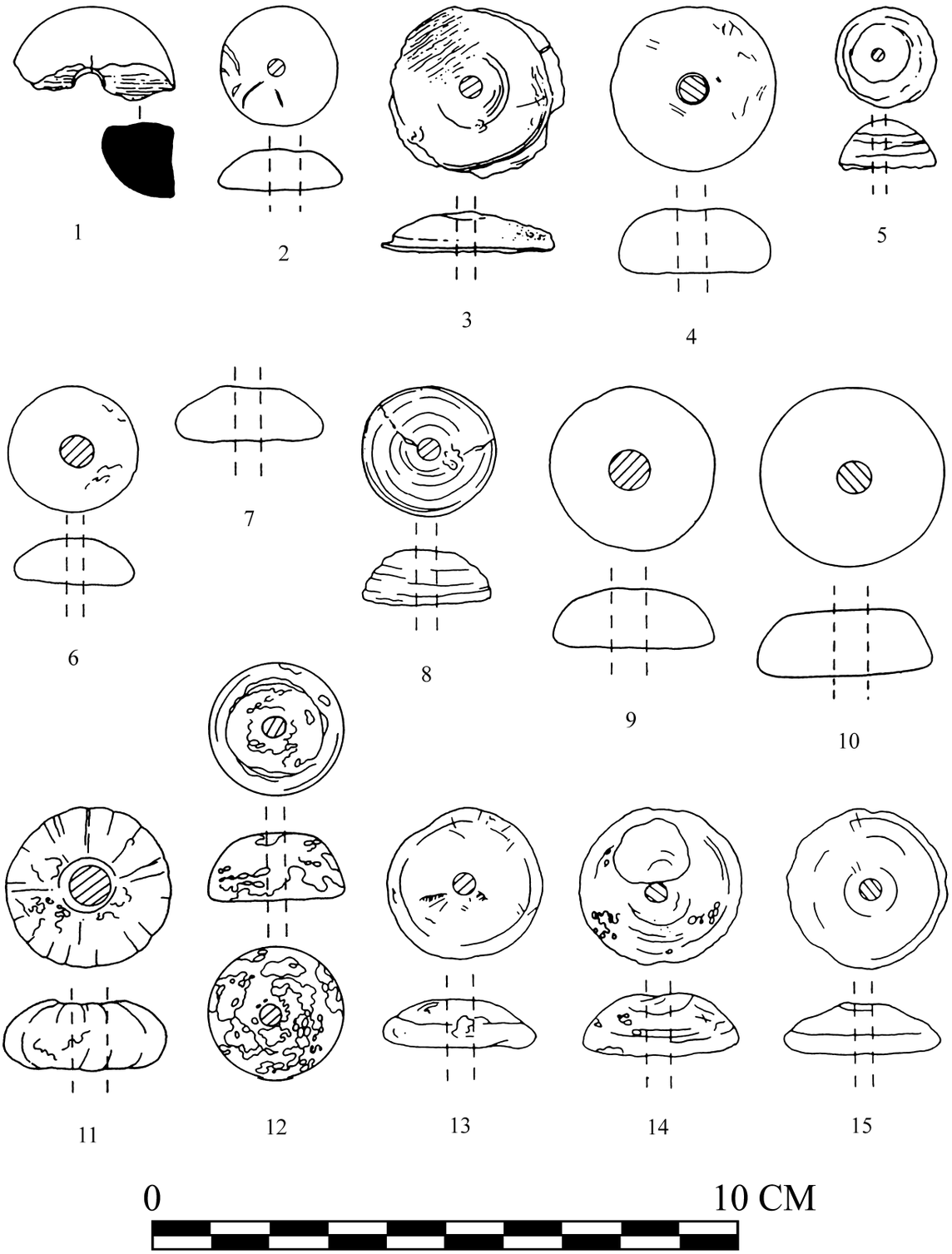


Figure 11.5 Hemispheroid-shaped and Pyramidal-shaped Spindle Whorls.

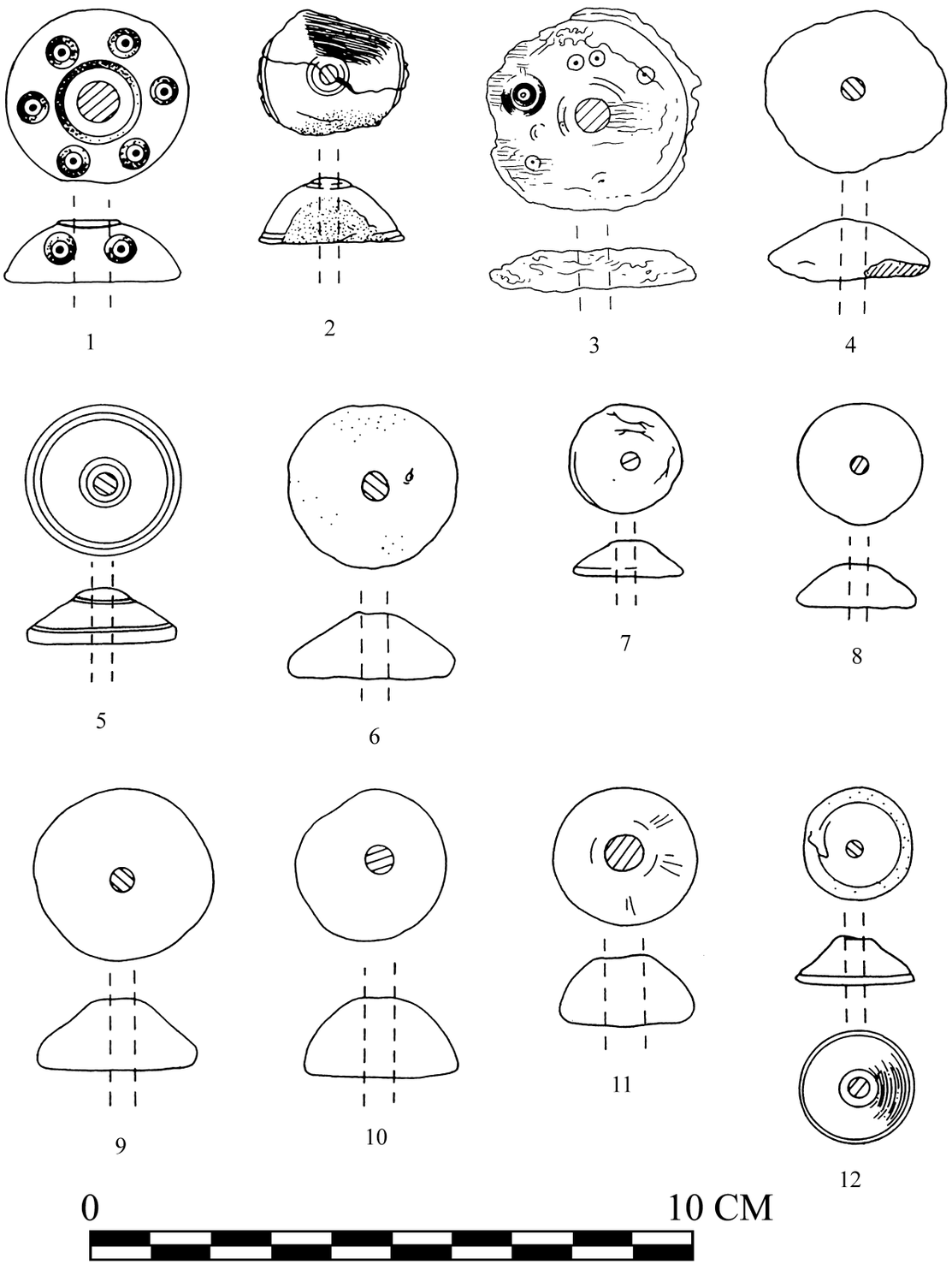


Figure 11.6 Potsherd Disc-type Spindle Whorls.

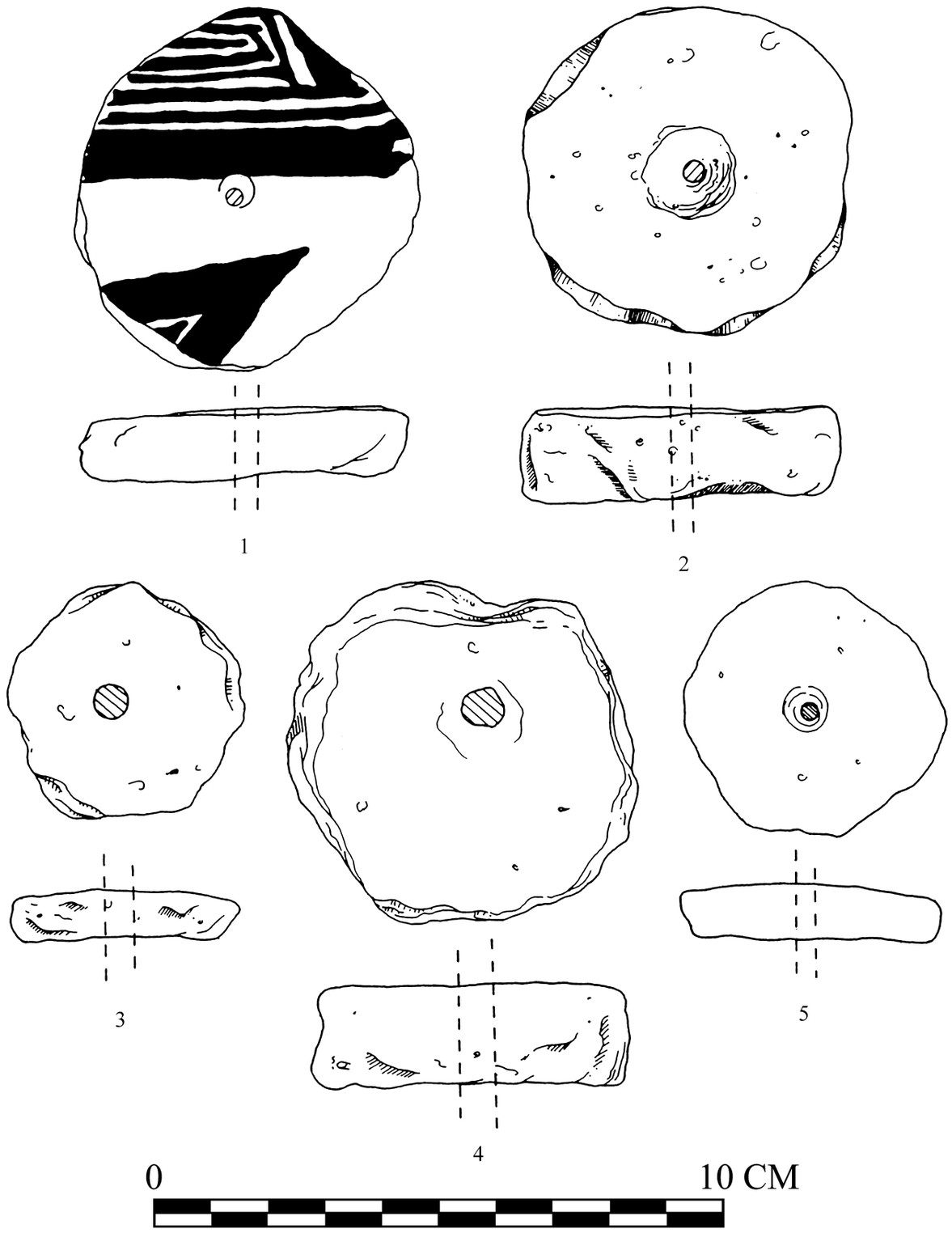


Table 11.3 Spindle Rests.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
1315	G.1:1	—	clay	6.0 cm across; th 1.87	—
1602	D.3:52	13	stone	3.7 cm across; th 3.0	hole in both surfaces
1850	C.2:76	16	stone	2.7 cm across; th 3.0	—
2310	C.1:123A	14	clay	6.5 cm across; th 1.9	cleanup
2399	C.1:123B	18	clay	4.1 cm across; th .8	—

Parallels

A Late Roman-period whorl from a Byzantine tomb at Naur (ʿAbbadi 1973: pl. 42; fig. 2, no. 4) is parallel with Hesban Object 2785 (fig.11.5:3). Although the design of the Naur whorl is different, with a ring-and-dot pattern in groups of three, there are two incised rings near the center hole on both of them and their incised decorations appear to be filled in with black. Three bone whorls with ring-and-dot designs from Samaria (Crowfoot, Crowfoot, and Kenyon 1957: 401-2, fig. 92a, nn. 19, 20, 21) are similar to Hesban Objects 1127, 2615 and 2785 (fig. 11.3:3; 11.5:1, 3). A third-fourth-century A.D. hematite "pyramidal" whorl with incised rings near the perforation (No. 11 Q2425, H) also from Samaria (Crowfoot, Crowfoot, and Kenyon 1957: 399, 400, 401) is similar to Hesban Object 2505 (fig. 11.5:12).

Spindle Rests

A spindle rest is an object in which the seated spinster rests one pointed end of the spindle. Its bowl aids the rotation of the spindle. Obviously, many kinds of objects can be used for this purpose; e.g., a small bowl or cup. The Hesban objects, which are identified here as spindle rests (Table 11.3), all have small depressions (Objects 1315, 2310, 1602 and 2399; see fig. 11.7:1-4. However, it is possible that some of these objects were merely unfinished spindle whorls.

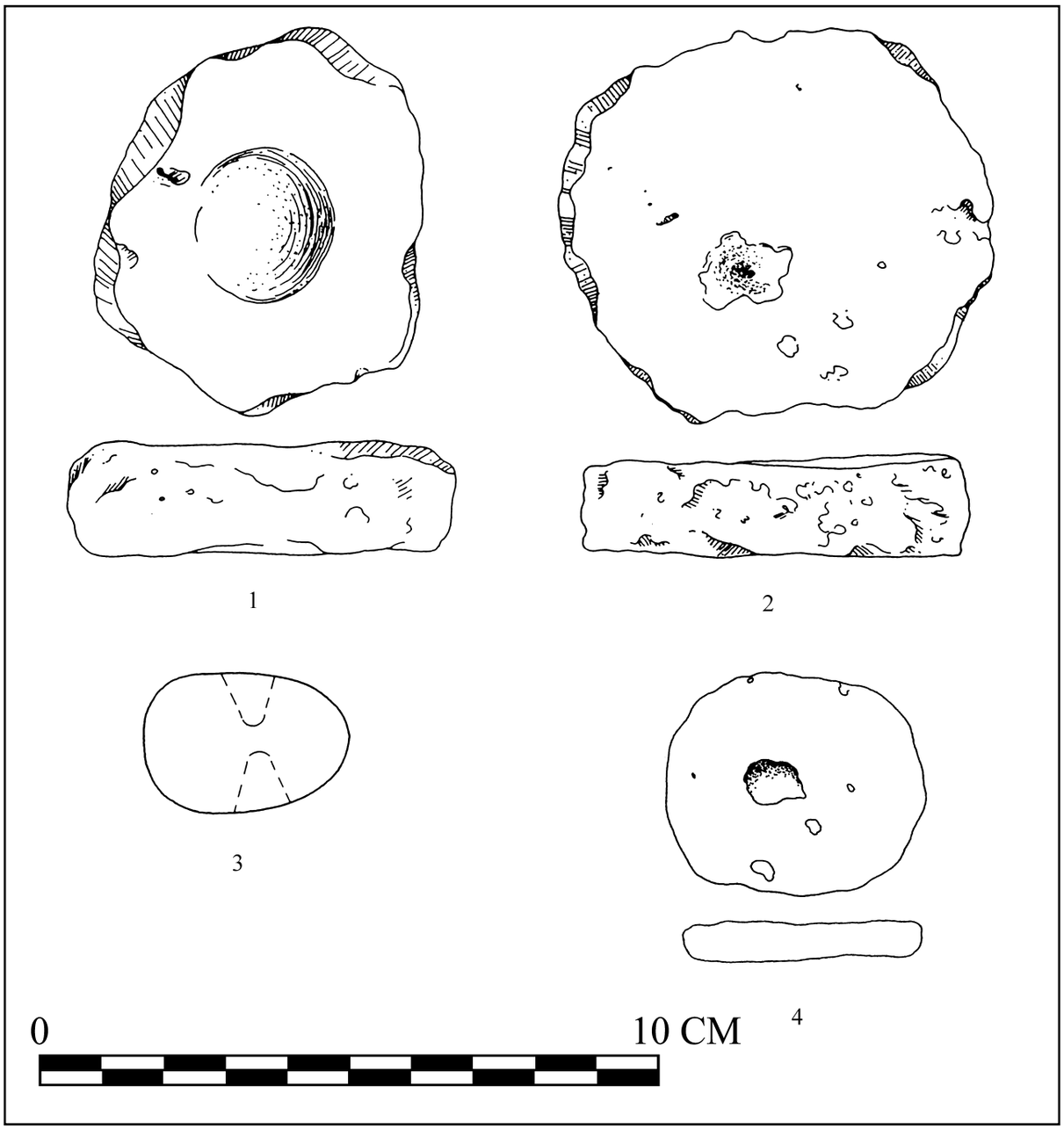
Weaving-pattern Spatulas

Weaving-pattern spatulas (Table 11.4) serve to separate threads in order to weave a colored design while the fabric is on a loom. They are made out of flat pieces of bone from the ribs of large domestic

Table 11.4 Weaving-pattern Spatulas.

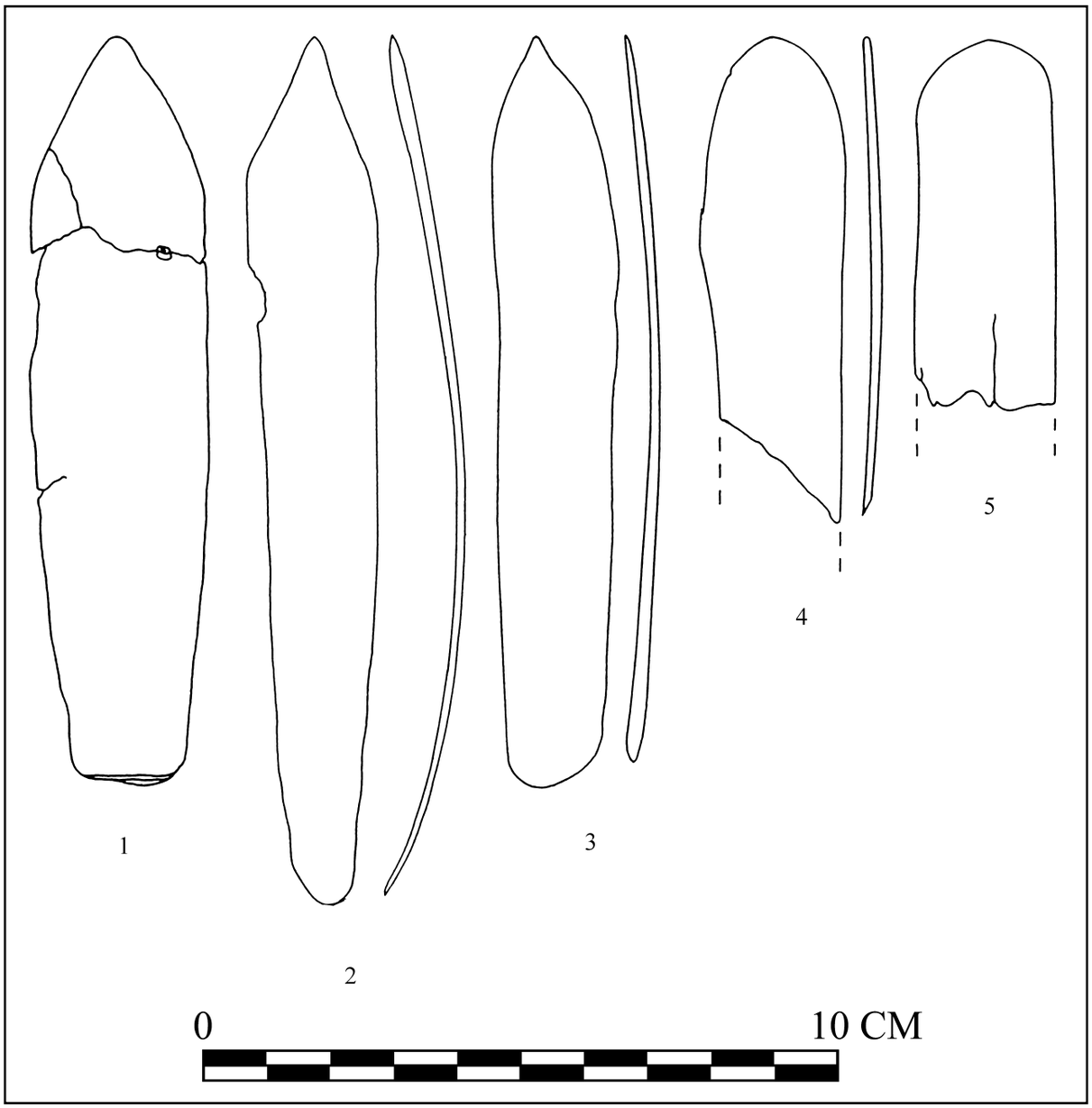
Object No.	Locus	Stratum	Material	Dimensions	Remarks
175	A.3:8	3	bone	L 7.63; W 2.27; th .20	end frag.
237	B.1:42	15	bone	L 5.9; W 2.7; th .27	end frag.
1119	B.3:39	13	bone	L 9.0; W 1.66; th .15	middle frag.
1399	B.3:62	15	bone	L 13.17; W 2.13; th at end .33; at point .14	two frags. making one whole object
1400	B.3:62	15	bone	L 6.61; W 2.02; th .20	end frag.
1418	B.3:62	15	bone	L 6.5; W 1.24; th .24	middle frag.
1501	C.1:88	14	bone	L 12.0; W 2.8; th .17	cracked whole object
1502	C.1:89	14	bone	L 14.0; W 2.0; th .18	whole object in good condition
1603	C.1:96	14?	bone	L 14.2; W 2.13; th .2	whole object in good condition
1618	G.3:10	—	bone	L 9.5; W 1.9; th .25	middle frag.
1669	C.2:51	16	bone	L 11.8; W 2.0; th .6	DAJ
1727	B.2:118	15/16	bone	L 6.77; W 1.57; th .17	two frags. near end
2001	B.2:62	14	bone	L 8.3; W 2.1; th .25	end frag.
2071	B.2:125	15/16	bone	L 6.4; W 1.5; th .2	grey color

Figure 11.7 Spindle Rests.



mammals such as cows, and are characterized by a narrow point that slopes out gently into twin shoulders. The whole examples from Hesban (Objects 1501, 1502, 1669; see fig. 11.8:1-3) range in size from 12 to 14 cm from point to end in length, average 2.5 cm in width; and ca. 0.2 cm in thickness (see also comparable fragments; Objects 175, 237, 1400, 1418, 1618, 2001 and 2071; figs. 11.8:4-5 and 11.9:1-5). This type of artifact is represented throughout most of the periods when the site was occupied (Iron Age through Late Islamic).

Figure 11.8 Weaving-pattern Spatulas.



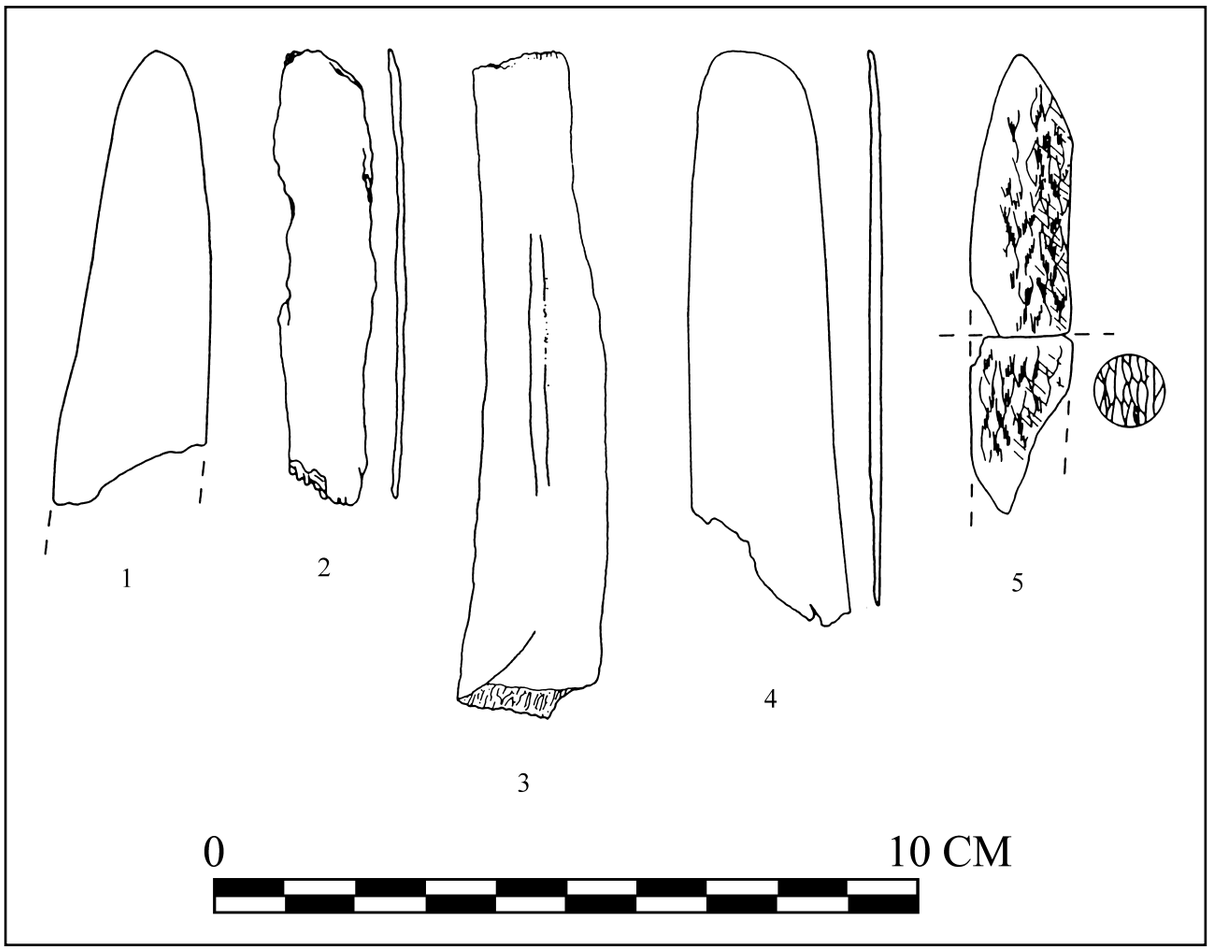
Parallels

Parallels to these objects have been found at Tell en-Naṣbeh (Harrison 1947: 265, 272, pl. 105:26-32), En-Gedi (Mazar, Dothan and Dunayevsky 1966: fig. 24:12, pl. 21:2), Ashdod (Dothan and Freedman 1967: fig. 12:13) and Khirbet al-Hajjar (Thompson 1972: 71, pl. 5, fig. 1, no. 33).

Needles

A basic definition of needle (Table 11.5), based on the artifacts discussed below, is an object which is longer than it is wide, with at least one perforation for an "eye." One type of needle employed at Hesban, probably in all periods, was a slender metal stave with a pointed end and a single ovoid

Figure 11.9 Weaving-pattern Spatulas.



eye (Objects 692, 1757 and 2638; fig. 11.10:1-3). Decay and weathering have no doubt prevented the survival of other such examples in bronze and iron. Objects of similar nature that have survived are mostly made of bone, with a few in more luxurious ivory. Five types of needles have been differentiated here.

Type one with a pointed head and two overlapping holes could have been used to draw a rather wide tape of fabric or leather. Seven fragments of this type have been found, but no whole objects, all from Late Roman-period tombs. Six of these fragments were found in Tomb F.18 and one (Object 2887) in Tomb F.38 (Objects 1512a, 1615a, 1617a; and 2887; fig. 11.10:4-7). The width of these fragments near the eyes averages *ca*. 0.63 cm. The length of the eye, i.e., the double perforation with one hole placed below the other in a lengthwise direction on the stave, averages ca. 0.65 cm.

Type two with a rectangular head and a single round eye appears to be a more "regular" needle in modern terms. There is an excellent whole example (Object 1910) made of ivory; a bone-head fragment (Object 1512b) from Tomb F.18 and a similar ivory-head fragment (Object 2377) (see fig. 11:10:8-10). Three stave fragments that strongly resemble whole ones (Object 1952, 2345, 2560; fig. 11.10:11-13) are all from the Late Roman period. The dimensions of Object 1910 (fig. 11.10.8), which appears to be characteristic of this thread-needle type, are 11.0 cm in length, 0.3 cm wide at its widest point with an eye of ca. 0.19 cm.

Type three is a three-eyed needle with one large eye in the flattened head area and two smaller eyes

Table 11.5 Needles.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
625	F.6:6	—	bone	L 6.5; dia at widest point .43	needle? stave frag.
626	F.6:6	—	bone	L 8.35	needle? stave frag.
627	F.6:6	—	bone	L .6; W at large eye .47	frag.; head of needle pointed; three holes in flat area, one large, two small
628	F.6:6	—	bone	L 8.0; dia .51	needle? stave frag.
629	F.6:6	—	bone	L 5.6; W at small eye .45	frag.; head of needle, one hole; cf. 627
630	F.6:6	—	bone	L 6.7; dia .53	two frags. of same needle? stave
631	F.6:6	—	bone	L 5.4; W at large hole .47	frag.; head of needle pointed; three holes present; cf. 627
632	F.6:6	—	bone	L 2.85; dia .27	needle-stave frag.
645	F.6:11	—	bone	L 8.58; dia .59	needle? stave frag.
692	F.6:12	—	bronze	L 6.25; dia .17	needle eye slightly damaged
768	B.1:91	15/16	ivory	L 5.64; W .95; eye .51	excellent condition; polished but blunt end; possibly a bodkin for drawing a string through a casing
826	C.4:54	6	bronze	L 3.8; W .35	frag.; a piece that graduates to a fine point; upper part is flat; no eye
1511	D.4:18	9	bone	L 4.48; W .66; eye .34	frag.; pointed at head above flattened eye area
1512a	F.18.1	—	bone	L 4.84; W .66; eye .62	frag.; pointed at head above flattened eye area; eye of two holes overlapping
1512b	F.18.1	—	bone	L 4.03; W .55; eye .26	frag.; rectangular head; single round eye
1614a	F.18:21	—	bone	L 5.0	frag.; pointed at head above flattened eye area; eye of two holes overlapping
1614b	F.18:21	—	bone	L 2.2; W .8	frag.; pointed head above flattened eye area; eye of two holes overlapping
1614c	F.18:21	—	bone	L 3.8; W 3.6	needle-stave frags.
1615a	F.18:18	—	bone	L 4.69; W .66; eye .63	frag.; pointed at head above eye area; somewhat flattened eye of two holes overlapping
1615b	F.18:18	—	bone	L 6.35; W .21 L 4.27; W .21	two needle-stave frags.
1616a	F.18:22	—	bone	L 2.93; W at eye .67; eye .51	frag.; more rounded head than others of same class; eye of two holes overlapping
1616b	F.18:22	—	bone	L 9.9; W .47	frag.; needle stave; flattened area opposite point end
1617a	F.18:19	—	bone	L 4.66; W of eye area .60; eye .60	frag.; pointed at head above eye area; eye of two holes overlapping; back is very flat
1757	B.4:202	16	bronze	L 7.0; W .21	fine point; single eye
1910	D.2:73	12	ivory	L 11.0; W .3	excellent condition; fine eye; round perforation; rectangular head
1930	?	?	bone	L 3.4	long bone of a rodent; perforation in top of needle; fine point
1933	C.7:8	2	bone	L 4.3	cf. 1930
1952	D.3:91	13	ivory	L 3.6; dia .35	stave frag.; probably similar to 1910
2055	C.7:34	3	bone	L 4.3	long bone of a rodent; cf. 1930
2241	B.7:19	9	bone	L 11.22; dia .51	needle? stave frag.
2345	F.27:7	—	ivory	L 3.56; dia .35	frag.; point of needle; probably like 1910
2377	D.4:94	12	ivory	L 5.57; dia near eye .37; eye .19	eye frag.; like 1910; rectangular head; single round eye

Table 11.5, *continued*. Needles.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
2560	F.27:13	—	bone	L 2.84; dia .32	stave frag.; probably like 1910
2638	F.31:10	—	iron	L 10.6; dia .6	heavily corroded; long, narrow eye perforation
2649	B.7:35	11-13	ivory (green)	L 3.2; W near eye .55	frag. of flattened eye segment; probably three eyes like 627; color: 5GY 7/1 "lt. greenish grey"
2695	G.15:3	—	bronze	L 3.6; W .37	corroded stave frag. of needle? near point
2808	C.6:73	3	bone	L 3.7	long bone of a rodent; cf. 1930
2887	F.38:11	—	bone	L 6.7; W .63; eye .66	frag.; pointed at head above eye area; flattened eye of two holes overlapping

on either side. This type of needle may have been used for decorative thread which had to be fastened to the needle, for reasons of economy. Three head fragments (Objects 627, 629, 631; figs. 11.10:14 and 11.11:1-2) were found in the same locus in Tomb F.6:6, all of them made of bone. The width of the flattened eye areas averages ca. 0.47 cm.

There is only one example of type four, which has a pointed head and round eye (Object 1511; fig. 11.11:3). Its remaining width is 0.66 and the diameter of the eye is 0.34.

Type five is a bodkin (Object 768; fig. 11.11:4) made of ivory. It is a rather flat object, much shorter than the objects above, with a large round eye, whose end is blunt, but smoothly rounded. Its purpose was to carry a tape through a casing or hem to make a drawstring. It is possible that it was also used as a netting bobbin.

A final group of rather enigmatic objects from Middle Islamic loci have been designated as possible needles (Objects 1930, 1933, 2055, 2808; fig. 11.11:5-8). They are made from the long bones of rodents, average about 4 cm in length and have a crude head with a small perforation. There is little working of the bone, and the natural joint area forms the enlarged head of the needle. It is difficult to see how these objects could have been employed, as the head could have caught on the fabric.

It is notable that several types of needles and hairpins were found together in the same tomb loci (see e.g., F.6:6; F.18:21 and 22). This might suggest the possibility of a tailor's kit with the bone hairpins perhaps used to hold the fabric while being sewn. Also included as possible needles are a number of stave fragments found near identifiable needle heads. However, from their diameter sizes they could have been hairpin stave fragments instead.

Parallels

Object 1910 is parallel with an ivory needle from Cistern I at Beit Nattif (Baramki 1935: pl. 5.8.). The head is more rounded, but the eye and other proportions appear to be similar. It also compares to two needles from Samaria (Crowfoot, Crowfoot, and Kenyon 1957: 428-30, fig. 100:19; 114:41). Object 1511, with its pointed head and round eye, also has a parallel at Samaria (Crowfoot, Crowfoot, and Kenyon 1957: 459, 46, figs. 114:44 and 45).

Needle Cases

Three objects may have been used as needle cases (Table 11.6). Object 544 is like the lobe of a pinhead, but what would be the stave hole has been suggested as a tube-like area for small needles. However, the extant needles from Hesban seem to be rather long for this container.

Object 1345 (fig. 11.12:1) is an ivory ring that might have served to bind together a group of bone needles similar to the way a modern table napkin ring is used. Object 2041 (fig. 11.12:2) is a larger, but similar bone fragment.

Figure 11.10 Needles.

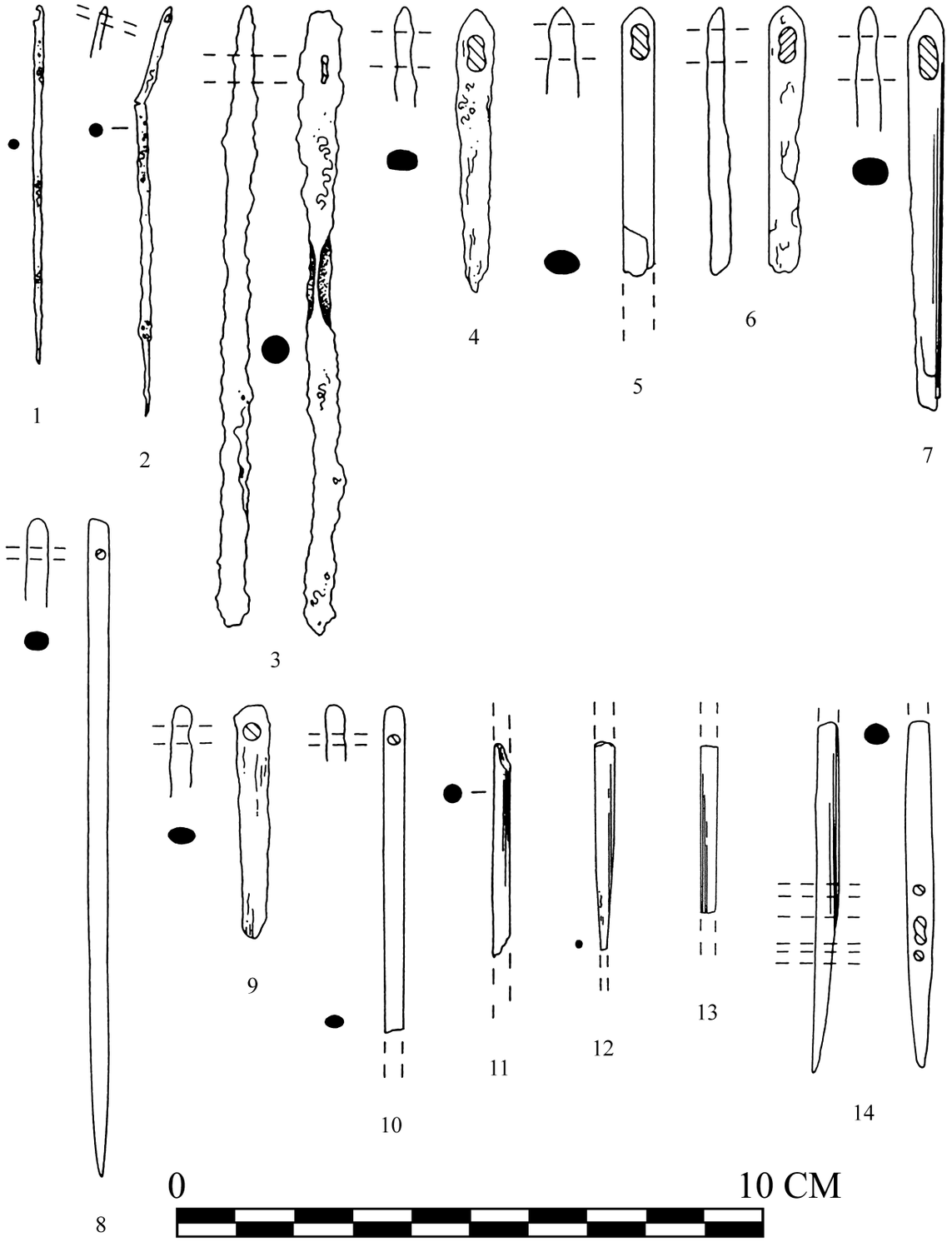
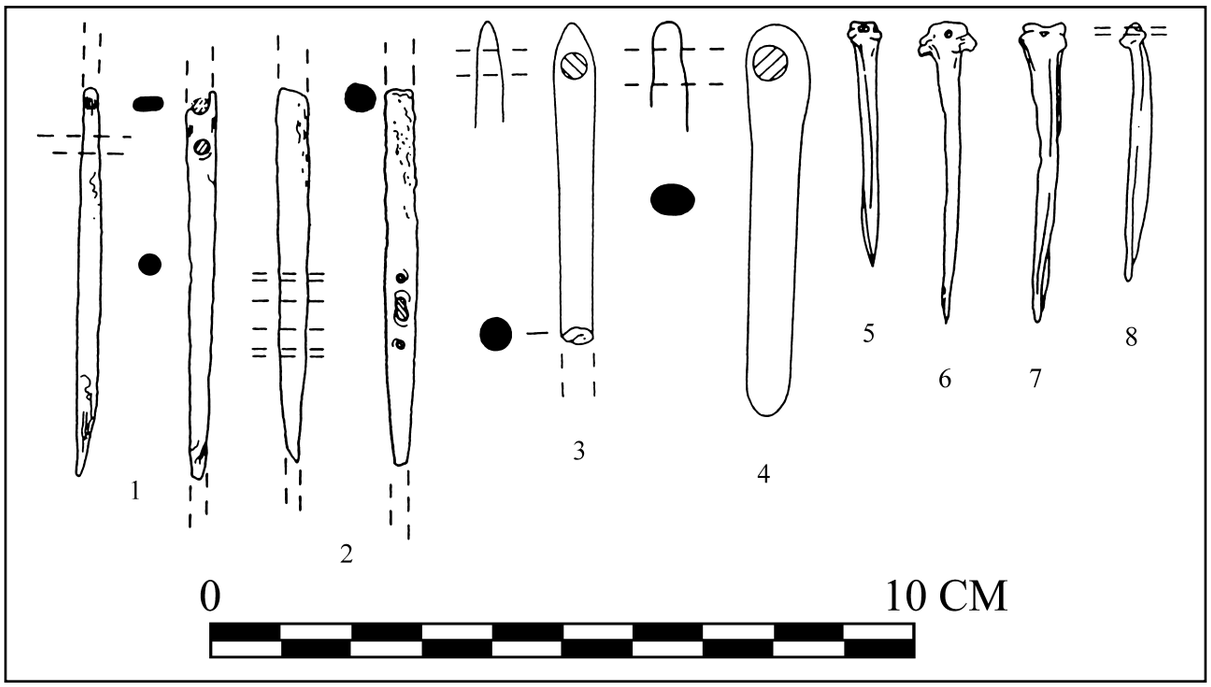


Figure 11.11 Needles.



Loom Weights

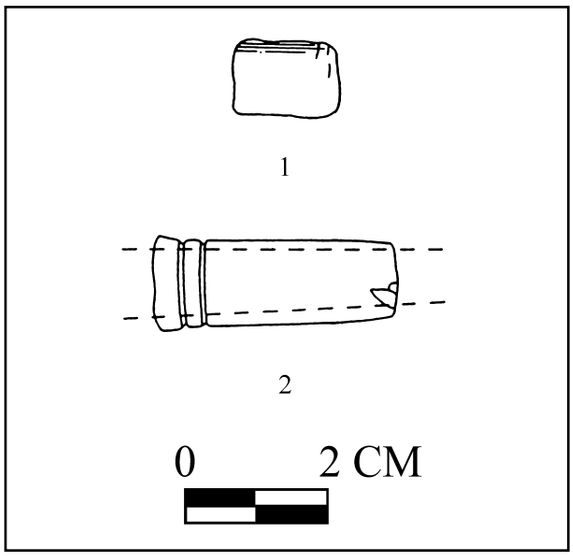
Fifty-one objects appear to have been used as loom weights (Table 11.7), all of them made of clay. There are two basic types. Type one is triangular, of which there are 48 examples, and type two is ovoid, with three examples.

Within the triangular group there are four that have slanted rows of dots presumably as special markings (e.g., Objects 1985 1990 and 1991; figs. 11.13:1-2; 11.14:1), and one with two holes (Object 1509; fig.11.14:2). The triangular form tended to be found in groups from the same square and within a small number of loci. From Square D.2 there were 17, all of which were found in Loci 76 and 77 (Stratum 15). Of the 14 found in Square A.5, 11 were located in Locus 62 (Stratum 14). The loom weights from Square D.4 were from Loci 99, 107, 118, 119, 120, mainly from Stratum 14. This demonstrates the fact that loom weights were used in groups. The few dotted ones may have been used to mark threads unique to a particular textile pattern. Other loom weights of interest include Objects 184 and 1833; fig. 11:14:3-4).

Table 11.6 Needle Cases.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
544	F.4:4	—	bone	L. 2.5; dia 1.23; hole .44	frag.; lathe made; rings and ring-and-dot decorations; hole suggests a needle holder
1345	C.2: (cleanup)	?	ivory	L. 1.37; dia 1.14	needle ring; case for needles
2041	A.8:22	3	bone	L. 3.55; dia at narrow end 1.4	tube-shaped; two rings at wide end; possibly a bone handle or fragment of a kohl tube

Figure 11.12 Needle Cases.



The triangular type are generally from the Late Hellenistic and Early Roman periods. Triangular loom weights dated within this time frame were also found at Samaria (Crowfoot, Crowfoot, and Kenyon 1957: 399, fig. 92a: 25, 26).

The size of the loom weights varies, the objects not being completely uniform. The triangular-shaped ones from D.2:76 and 77 are the largest, ranging in height from 8.1 to 11.0 cm. Their width across the base averages 4.8 to 9.0 cm. The diameters of their holes are 0.55 to 2.5 cm. The loom weights from Locus A.5:62 and Square D.4 are somewhat smaller, averaging just under 7 cm in height, 4 cm at the base, with a 0.5 cm diameter for the hole.

The ovoid loom weights from Hesban include Objects 1599, 1854 and 2064. A few others are sometimes classified as "whorls" or "loom weights." Hesban Object 1671 is similar to one of this type from Samaria (Crowfoot, Crowfoot, and Kenyon 1957: 399, 400, fig. 92a.4). Objects 1401 and 1932 also belong to this category.

Table 11.7 Loom Weights.

Object No.	Locus	Stratum	Dimensions	Remarks
184	B.1:18	15/16	H 7.0; widest part of base ca 4.0; hole .65	triangular; single perforation
1120	B.3:41	13	-	triangular
1121	B.3:41	13	H 7.6; base 3.4; hole .6	triangular
1122	B.3:41	13	H 6.7; base 3.9; hole 1.0	triangular; middle broken
1218	B.3:46	13	H 7.6; base 4.7; hole .5	triangular; side missing
1509	C.1:93	14 ?	H 9.4; base 6.4; holes ca. .4	triangular; two perforations
1544	D.1:59	13	H 7.4; base 6.2; holes 1.2	triangular; bottom broken
1599	B.4:153	13 ?	H 3.8; dia 4.8; hole .7	ovoid; half; several cracks
1783	A.5:62B	14	H 5.5; base 4.3	triangular; top missing
1833	A.5:62E	14	H 6.7; base 3.8; hole .8	triangular; single perforation
1834	A.5:62E	14	H 6.0; base 3.9; hole .5	triangular; side damaged
1854	D.1:88	13	H 2.4; dia. 3.4; hole .6	ovoid; half
1875	D.2:76	14/15	H 9.9; base 5.3; hole .8	triangular
1876	D.2:76	14/15	H 8.1; base 6.2; hole .6	triangular
1884	A.5:62F	14	H 7.4; base 4.4; hole .4	triangular; side missing
1919	D.2:92	14/15	H 8.0; base 6.1 x 5.3; hole .8	triangular
1944	D.2:95	14/15?	H 8.4; base 6.1; hole .8	triangular; base damaged
1945	A.5:62A	14	H 5.4; base 4.9 x 4.6	triangular; top missing
1948	A.5:62B	14	H 5.5; base 4.0	triangular
1949	A.5:62A	14	H 6.8; base 3.8	triangular; top and bottom missing
1950	A.5:62C	14	H 4.0; base 3.9	triangular; top missing
1959	D.2:77A	15	H 9.0; base 6.0 x 5.5; hole .5	triangular; top is broken
1961	A.5:62D	14	H 6.3; base 4.0; hole .5	triangular; top is broken
1980	D.2:77B	15	H 11.0; base 9.0; hole 2.5	triangular; many cracks
1981	D.2:77B	15	H 9.8; base 6.1; hole .6	triangular; broken in middle

Table 11.7, *continued*. Loom Weights.

Object No.	Locus	Stratum	Dimensions	Remarks
1982	D.2:77B	15	H 8.7; base 6.5; hole .7	triangular; poor condition
1983	D.2:77B	15	H 8.7; base 6.0; hole .8	triangular; small hole on one side above regular hole and on bottom
1984	D.2:77B	15	H 9.3; base 4.8; hole .8	triangular; slanted rows of dots; top and bottom broken
1985	D.2:77B	15	H 10.1; base 6.0; hole .83	triangular; slanted rows of stipples
1986	D.2:77B	15	H 10.3; base 6.0; hole .7	triangular
1987	D.2:77B	15	H 9.5; base 5.6; hole .5	triangular; impressed line on side
1988	D.2:77B	15	H 8.0; base 6.0; hole .6	triangular; top broken
1989	D.2:77B	15	H 8.7; base 6.1; hole .9	triangular
1990	D.2:77B	15	H 10.3; base 5.8; hole .65	triangular; slanted rows of stipples
1991	D.2:77B	15	H 10.8; base 5.6; hole .55	triangular; slanted rows of stipples
1992	D.2:77B	15	H 8.1; base 4.7; hole .8	triangular; bottom and sides broken
1993	D.2:77B	15	H 8.5; base 5.5; hole .7	triangular; cracked; side and base missing
2019	A.5:87A	14 ?	H 6.7; base 3.2; hole .5	triangular
2022	A.5:87A	14 ?	H 5.2; base 4.2	triangular; top and bottom sides missing
2027	A.5:87A	14 ?	H 6.4; base 4.0; hole .9	triangular; side missing
2051	D.2:95A	13	H 8.9; base 5.3; hole 1.0	triangular; cracked
2064	A.5:91	11	H 3.9; dia. 5.0; hole .5	ovoid; 2 holes on one side; small holes on edge
2065	D.2:95D	14	H 9.0; base 5.5; hole .7	triangular; side missing
2510	D.4:99	13 ?	H 4.8; base 3.7	triangular; top half and sides missing
2541	D.4:107	14 ?	H 5.7; base 4.0; hole .6	triangular; top and bottom missing
2542	D.4:107	14 ?	H 6.4; base 4.2; hole .7	triangular; top missing; a v-shaped mark is on the corner of the base
2558	D.4:107	14 ?	H 6.8; base 3.6; hole .4	triangular; broken in middle
2559	D.4:107	14 ?	H 6.1; base 3.7; hole .7	triangular; top side is missing
2583	D.4:118A	14	H 6.8; base 5.9	triangular; pieces missing
2606	D.4:119	15 ?	H 7.1; base 4.2; hole .9	triangular; side and bottom are missing
2621	D.4:120	14	H 4.2; base 4.8	triangular; top half is missing

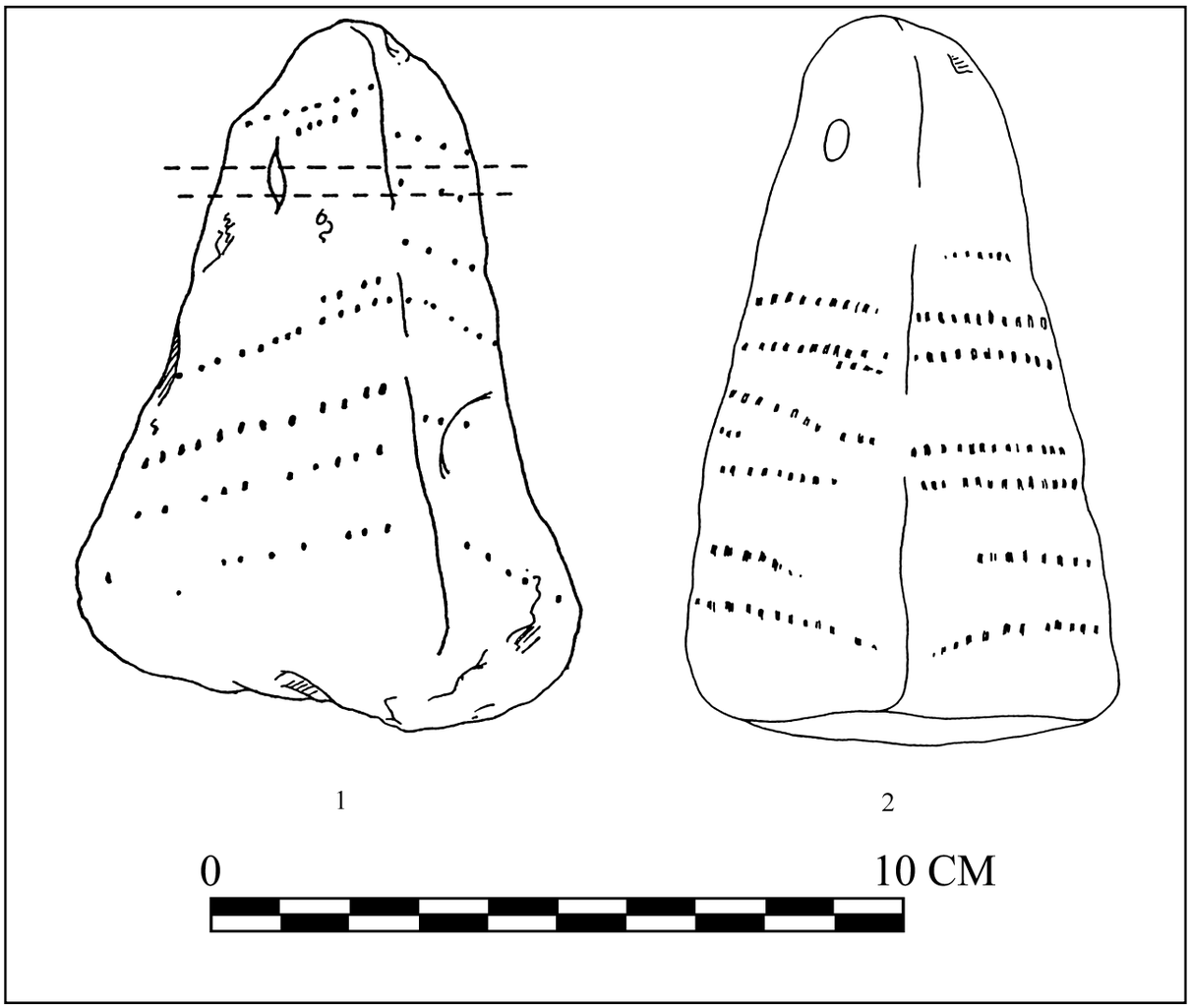
Buckles

Eleven objects have been classified as buckles (Table 11.8). Object 872 (fig. 11.15:1) is a bronze belt buckle with a complete tongue, and a bronze foil segment bent double over the tongue for the purpose of holding the belt in place. The rectangular buckle is framed by a ca. 0.3 cm round cross section. The attachment of the tongue bar to the rest of the frame is distinctive. Two disks, on either end of the "C"-shaped frame segment, are pierced by the bar. A similar belt buckle, from Delos, is dated to the Roman period (De Boccard 1938, pl. 88:79). There is also a bronze buckle (B1162) with a rectangular piece fastened to it, decorated with an "X."

Object 890 (fig. 11.15:2) is a small rectangular bronze buckle with the tongue missing. The tongue bar has a ring in its center with a perforation for the attachment of the tongue to that exact place. On the horizontal sides there are two small protrusions a few millimeters from the vertical segment of the frame. These points may have been used to make a cloth belt secure while the tongue-bar ring kept the metal tongue-loop from tearing a more delicate fabric.

Object 1004 (fig. 11.15:3) is a rather corroded iron belt buckle with an intriguing 7.62 cm long metal (?) attachment with cloth impressions adhering to the under side. The circular buckle is turned back over the metal attachment, and the straight tongue is slightly graduated at the tip. The metal attachment doubles over the buckle area where the tongue is based, and is 1.6 cm wide at this point, before tapering halfway down to 0.8 cm, then

Figure 11.13 Loom Weights.



widening again to 1.6 cm. In the tapered area another metal piece appears to be cut from the back layer, making a winged cross with tapered center. The central width of the crossbar, where the cloth impressions are, is 2.5 cm.

Object 1071 (fig. 11.15:4) is buckle with a "U"-shaped-looped tongue, curved to hook conveniently on a "C"-shaped frame with graduated ends forming a slight separation at the place where the loop is attached. Object 1398 (fig. 11.15:5) is almost identical to Buckle 1071 except for the rounded tongue attachment. It has a "C"-shaped frame and slightly graduated ends that meet with a small separation at the place where the 2.7 cm × 0.3 cm looped tongue is attached. Bronze Buckle 2175 from Corinth (Davidson 1952: pl. 113) dates between the fourth and eighth centuries A.D. It is very similar to Hesban Objects 1071 and 1398. Davidson (1952: 266) says that the earliest buckles at Corinth were fourth century A.D. in date and that most of the early shapes were simple (oval or nearly circular) in form, often with a narrower portion on one side to which the tongue was attached.

Object 2000 (fig. 11.15:6) is an elegantly-shaped bronze buckle on which corrosion obscures the details of manufacture. Its rectangular frame sports a relatively large tongue-bar with enlarged angular ends. The 2.2 cm tongue is rather large for

Figure 11.14 Loom Weights.

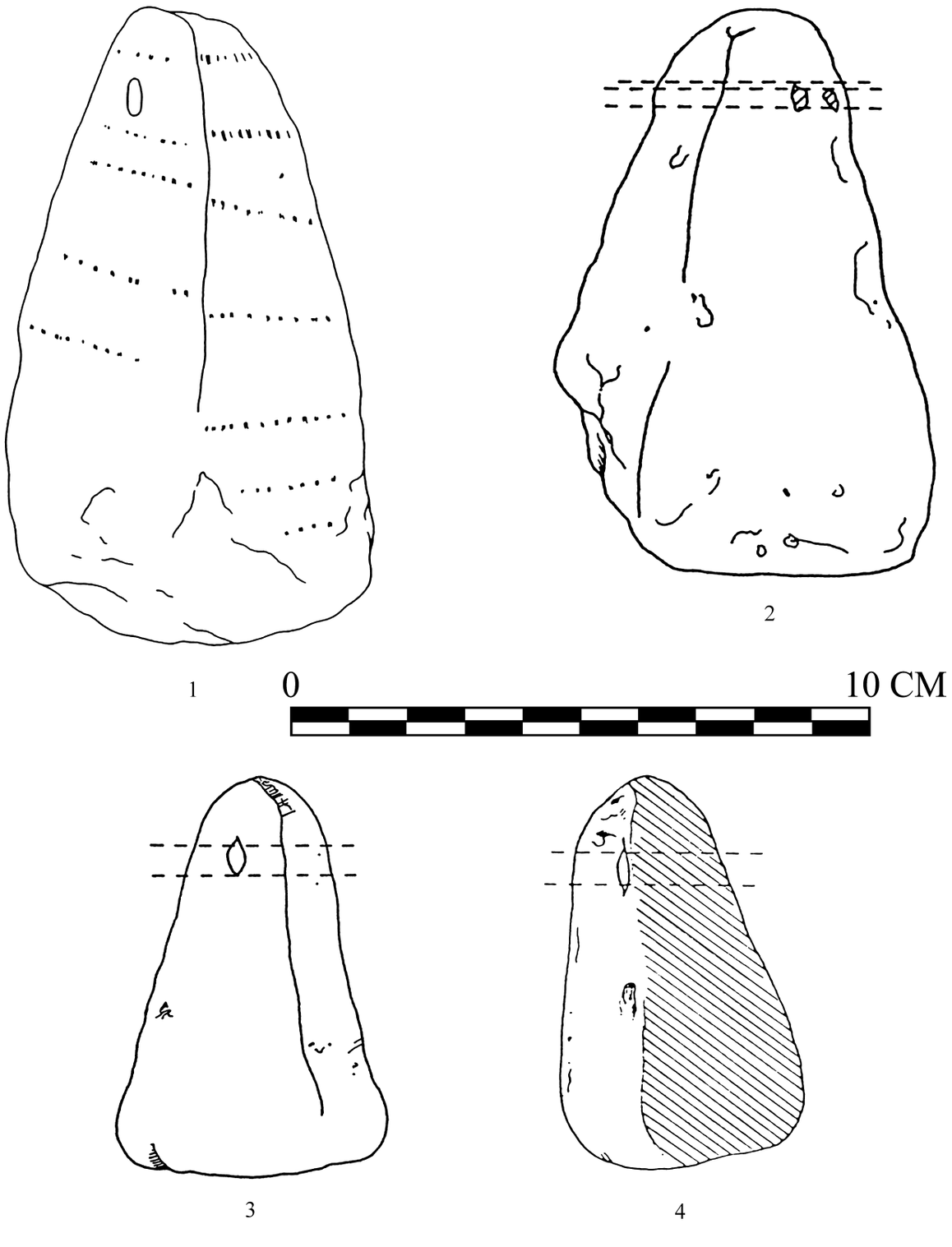


Table 11.8 Buckles.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
80	C.1:5	3	iron	L 4.2 cm; W 3.3 cm	corroded
872	F.10:7	—	bronze	L 6.64 cm; W 5.0 cm	metal piece to hold end of belt
890	C.5:4	3	bronze	2.8 cm x 1.85 cm	—
1004	F.10:8	—	iron	3.5 cm x 0.4 cm	corroded; cloth impressions
1071	F.10:6	—	bronze	2.6 cm x 2.3 cm	—
1398	D.4:4	9	bronze	2.8 cm x 2.2 cm	excellent condition; almost identical to 1071
1824	C.5:50	?	iron	5.5 cm x 3.0 cm	corroded
2000	A.9:98	9	bronze	2.1 cm x 1.4 cm	proportionately long tongue
2054	G.6:25	—	bronze	dia 3.4 cm	twisted ring
2250	C.6:24	3	iron	2.0 cm x 1.7 cm	discarded in field
2694	G.15:3	—	iron	2.6 cm x 2.2 cm	similar to 1071 and 1398

the frame. On one side under the loop, a crescent is visible. Object 2250 (fig. 11.15:7) is a corroded "B" shaped iron buckle, with the tongue missing. Fragmenting after it was accidentally dropped, it was later discarded in the field. Object 2694 (fig. 11.15:8) is an iron "C"-shaped buckle, with a 2.3 cm looped tongue and two visible ends at point of attachment.

Other objects that may have been buckles, but which not enough of the artifact exists to make an intelligent decision, include Object 80 (fig. 11.16:1), a heavily corroded ovoid iron artifact with a pronounced bulge in what could be the tongue-loop area; Object 1824 (fig. 11.16:2), a heavily corroded iron fragment; and Object 2054 (fig. 11.16:3) which is a heavy bronze ring with large twists. One of its ends is widened, flattened, and attached to the twisted end. Because a piece of iron, which looks like a buckle tongue, adheres to the twists, the appearance of the piece suggests a buckle. Though possible, this is unlikely because there is no evidence of a loop or loop-wear on the ring.

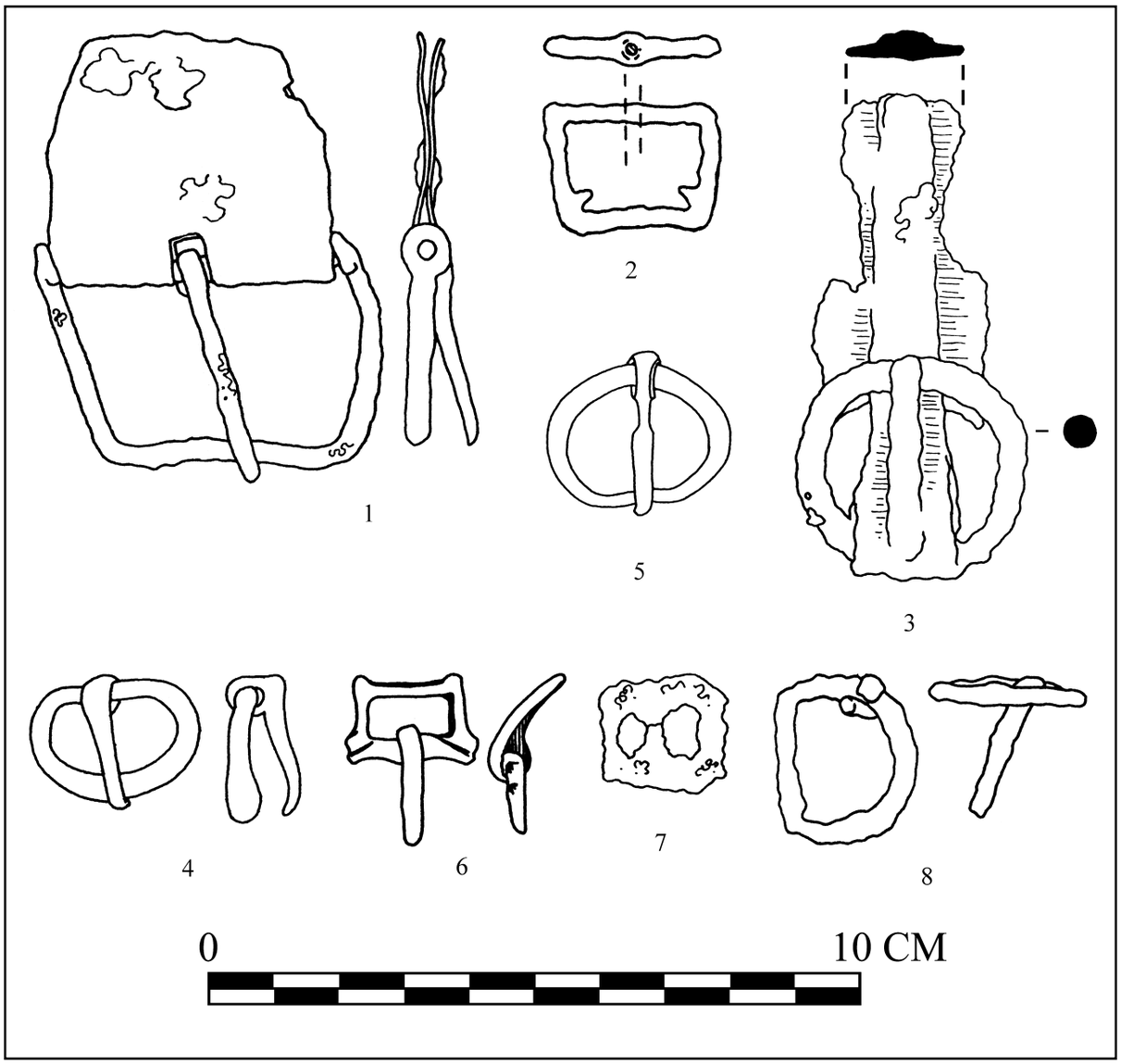
Buttons

Thirteen Objects are classified as buttons (Table 11.9). Object 161 (fig. 11.17:1) is a shank-type brass button with the head of an ancient Roman sol-

Table 11.9 Buttons.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
161	C.3:1	2	brass	dia 2.6	Italian military 1870 A.D.
347	B.4:1	2	bone	1.9 cm x 1.6 cm	single square perforation
930	D.6:33C	3	bone	2.46 cm long	comparisons establish this as a kind of button
998	F.1:2	—	?	2.2 - 1.5	half circles with 2 holes
1055	D.6:33H	4	bronze	dia 2.5	6 holes; 1 loop
1134	C.4:41	6	shell	dia 2.15; hole .71	flat back, edge naturally thickened; natural ridges; color 10 YR 8/2 "white" and pale brown
1165	F.1:2	—	glass	W 2.7	DAJ; 2 black glass objects; 2 perforations each
1166	F.1:2	—	glass	W 2.6	frag.; may be an unusual bead
1799	D.2:43	11	bronze	dia 3.25	square perforation; raised area in center; cf. 1055
2243	F.22:5	—	plastic	dia 2.8	modern button
2346a	F.27:7	—	bronze	dia 1.4	used as dangle on a bracelet
2349	F.27:6	—	silver	dia 1.7	ingot fastened to belt?
2936	G.15:32	—	bronze	dia 1.75	—

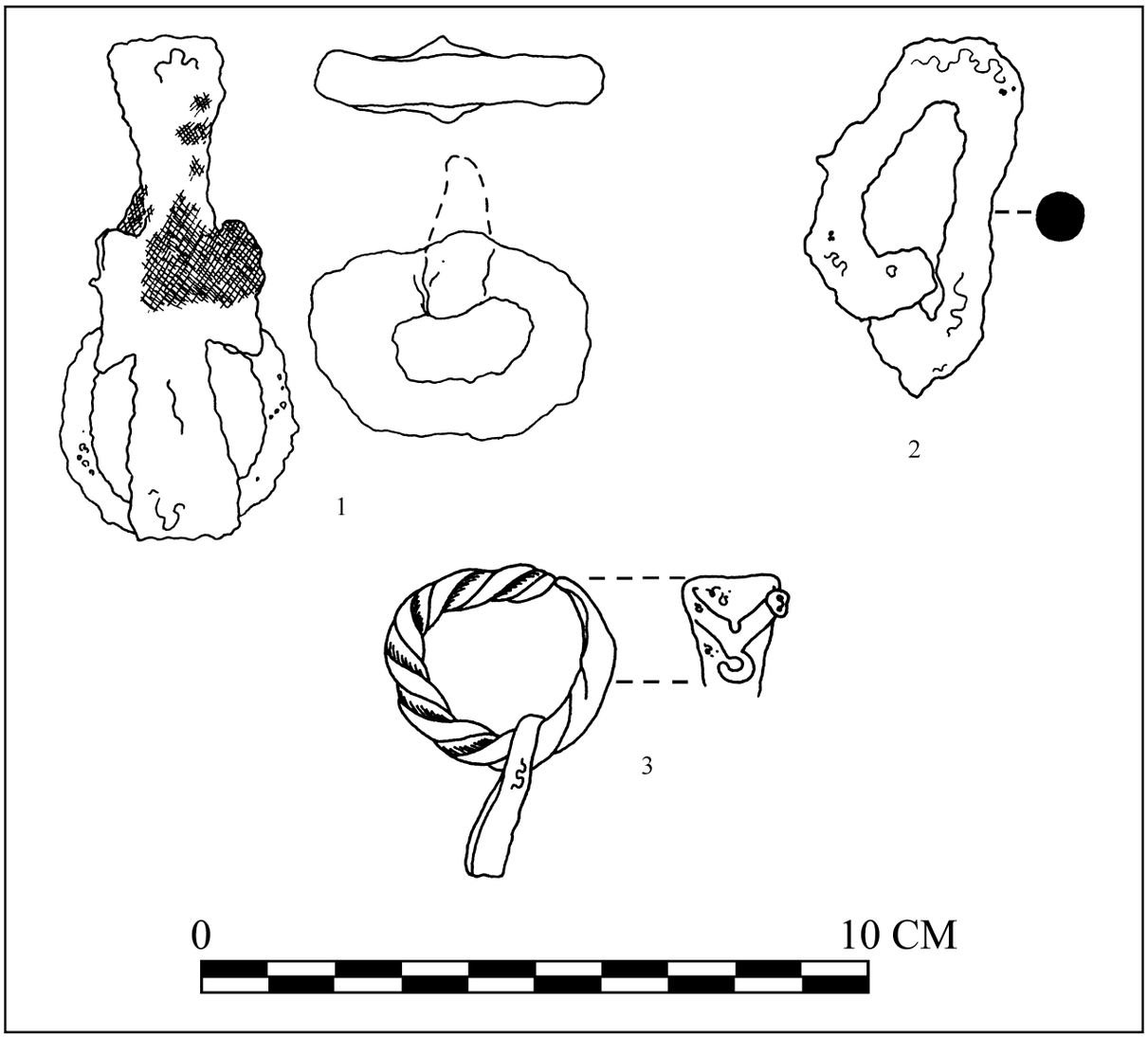
Figure 11.15 Buckles.



dier in profile, and inscribed letters stamped inside the ring frame. This type of button was used on Italian military uniforms starting around A.D. 1870.

Object 930 (fig. 11.17:2) is a 2.46 cm-long bone fragment. It appears to have originally been a pin stave, with a rather narrow cross section. One end is finished while the other has an obvious break. However, since the piece was made on a lathe, with one end having a characteristic indentation, the other end might be considered a planned break. The carving is basically a baluster type with ovals, disks and mushroom effect. Between the two identical mushrooms is a straight waist, which would have held the string or fabric fastener. A similar "rare type of button" was found at Corinth (Davidson 1952: 298, no. 2589). These types of buttons were probably attached to the garment by fastening a thread around the central depression. Comparisons are also made with eighth- and seventh-century B.C. examples from Sparta (Davidson 1952: 298, n. 76).

Figure 11.16 Buckles.



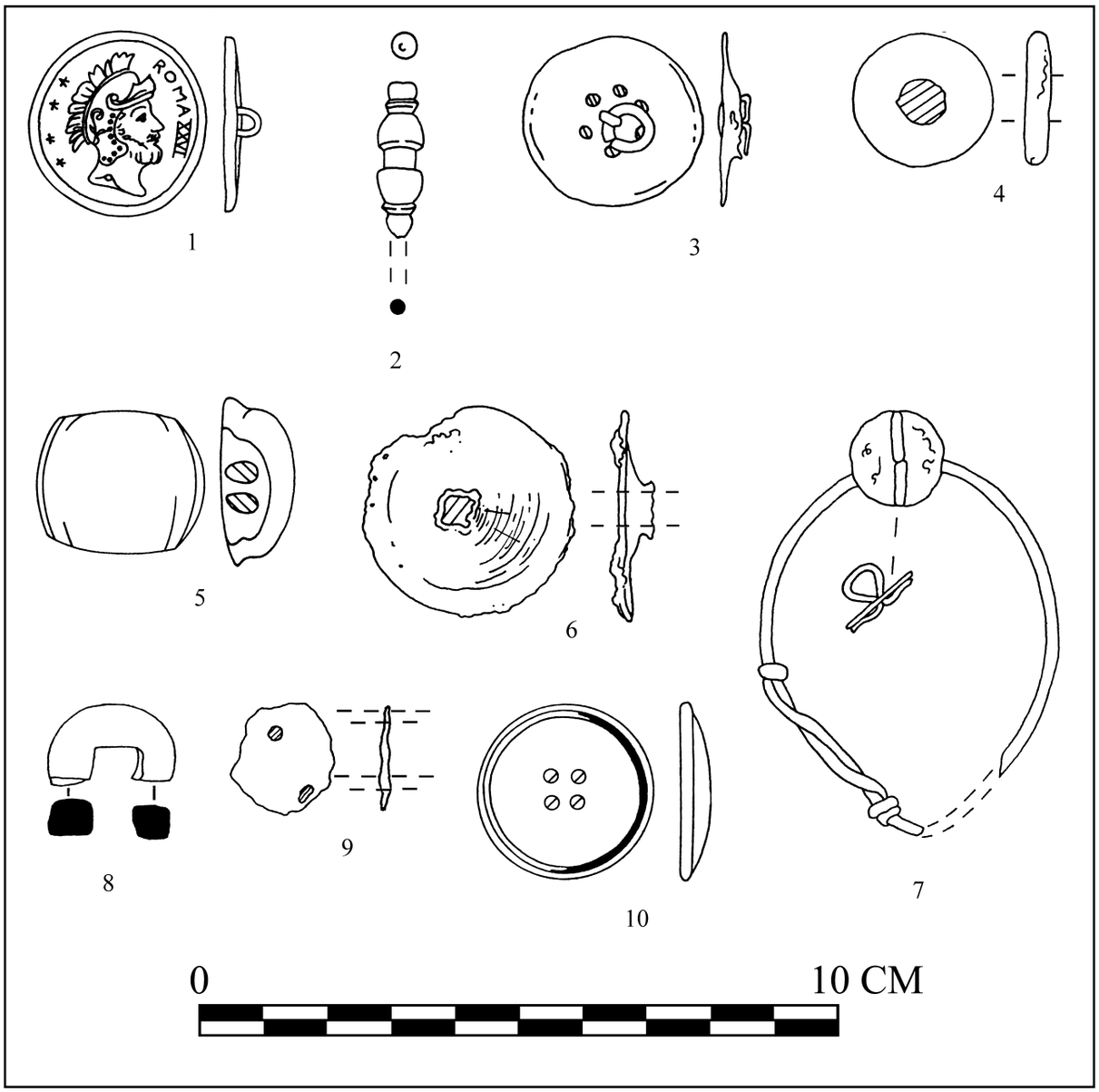
See similar artifacts from Delos (De Boccard 1938: 241, pl. 76: 642, 645-46).

Object 1055 (fig. 11.17:3) is a flat bronze foil disk with a slight depression in the center. Six small holes, perforated from the upper surface, surround a loop whose ends splay on the lower surface. Attached to the loop is an 0.8 cm-diameter ring. Either the button was sewn to a garment with thread through the six holes, or it was part of a hook-and-eye attachment.

Object 1134 (fig. 11.17:4) is a shell disk with a single hole. Its lighter weight and more delicate fabric distinguish it from a spindle whorl. Perhaps it was affixed by a loop sewn to a garment. If so, the single hole would then have been placed over the loop and a small bar inserted through it on top. Its naturally thickened edge may have acted as a groove to keep the bar in place.

Object 1165 (fig. 11.17:5) is a black button-like object with two straight and two curved sides as well as two holes. The curved sides at their widest part measure 2.7 cm, with perforation lengths of 1.82 cm. The "D"-shaped cross section is 1.2 cm thick. The bottom is flat; the top convex. On each

Figure 11.17 Buttons.



of the curved sides is a ridge. The surface of this opaque black glass material is shiny with small cracks. Alternatively it might have served as a bead strung through the holes. Object 1166 is similar and from the same find-spot.

Object 1799 (fig. 11.17:6) is a slightly corroded bronze disk with a single square perforation punched in a depressed area in the center The perforation measures 0.5 cm across. Like Object 1134, it was perhaps affixed to a garment by a loop-and-bar.

Object 2346 (fig. 11.17:7) is a broken bronze bangle (b) with a shank-type bronze button (a) attached to it as a pendant. The button has a loop that is pushed through from the reverse side, with ends splayed across the diameter of the top side.

Table 11.10 Fibulae.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
84	D.3:5	2	bronze	L ca. 6.5 cm	frag.; possibly part of a fibula bow or unusual brooch
162	A.1:15	12	bronze	dia of ring 2.1 cm	ring and cotter-pin
302	B.1:47	15/16	bronze	coils; dia ca. .8 cm	fibula frag.; coil or spring section
543	F.4:4	—	bronze	L 7.25 cm; W 5.9 cm;	DAJ; bow rises 3 cm; crossbow fibula; plain rings below finials, pin present
593	F.4:4	—	bronze; shiny brass surface	L 7.15 cm; W 4.9 cm;	bow rises 2.7 cm; crossbow fibula; ribbed rings below finials; acorn finials finely shaped, crossbar has small open rings
1045	B.2:42	15/16	bronze	coils; dia ca. .8 cm	cf. 302
1343	B.2:72	15/16	bronze	L 6.1 cm; bow rises 2.1 cm	fibula frag.; hand clasp
2040	G.10:8	—	bronze	L 4.9 cm; bow rises 2.5 cm	DAJ; design on bow
2067	B.7:14	9	bronze	L 7.1 cm; bow rises 2 cm	frag.; pin missing
2552	F.31:14	—	bronze	dia 2.5 cm; stave 3.8	circular garment pin with stave; cf. 2774
2774	F.31:24	—	bronze	dia 2.9 cm	DAJ; circular garment pin with stave; cf. 2552

Other objects which may have or may not have functioned as buttons include: Object 347 (fig. 11.17:8), which is a fragment of a circular bone object, the center of which has a large square perforation. Both sides are flattened and polished. Object 2349 (fig. 11.17:9) is a rough-edged silver disk that appears to have two holes for attachment. One of these holes is on the edge, which would make it impossible to fasten to a garment in its present condition. Possibly this object is old silver that was melted down for use as an ingot, the holes used to suspend it to some kind of money belt. Object 2936 is listed by the field archaeologists as a "bronze button," but it was unavailable for analysis, so nothing more can be said about it. Finally, Object 2243 (fig. 11.17:10) is a modern plastic button that is weathered to a brownish-green color and has an outer ridge, flat surface, convex reverse, and four holes for attachment.

Fibulae

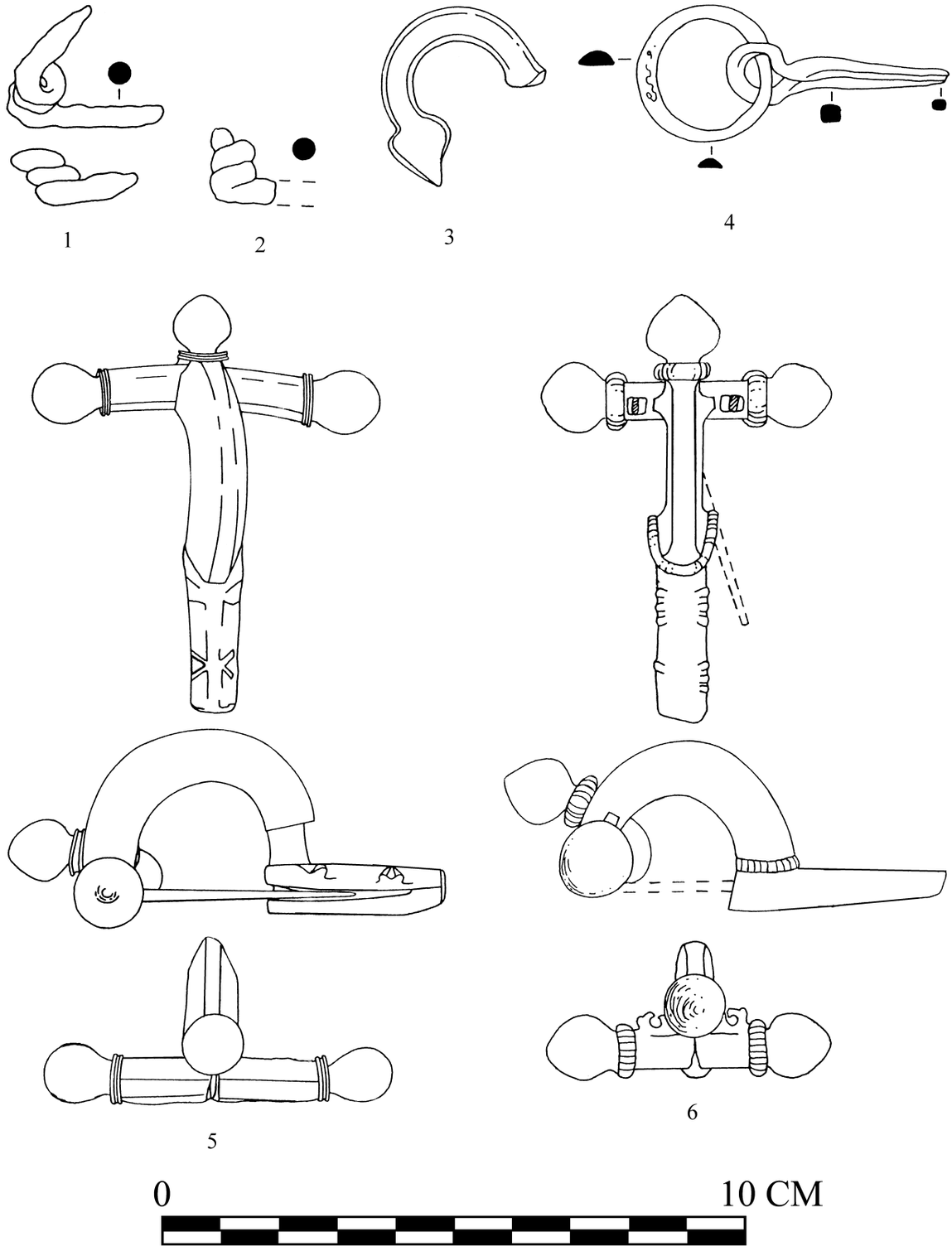
Fibulae (Table 11.10) are ancient forms of garment pins with a clasp. They enabled pieces of fabric to be used in a variety of ways without being cut, tailored, or sewn, and are often described as being like the modern safety pin. In Palestine their use began in the Iron Age (Stronach 1959), when they replaced the simpler toggle pin. They were quite popular in the Roman period.

Object 302 (fig. 11.18:1) is a fragment of a bronze fibula spring. It is a strip of metal, ovoid in cross section, that is coiled over itself in three circles. The coils are ca. 0.8 cm diameter; the fragments extending from them are 2 cm and 1.1 cm in length, respectively. Typologically, the whole object would probably have been classified as a simple semicircular or arched fibula (Stronach's Type I or II), as is Object 1045 (fig. 11.18:2), which is similar.

Object 84 (fig. 11.18:3) is a strip of bronze, 0.5 cm wide, shaped into a crescent or semicircle. One end is broken off and has a ragged edge; the other end is heart-shaped with shoulders that extend to 1.0 cm and then graduate to a point. This object is probably a fibula bow or else part of a brooch.

Object 162 (fig. 11.18:4), a bronze ring with a hook attached, may have been used as a type of fibula. Alternatively, it might be two unrelated objects linked in antiquity such as a finger ring and a cotter pin. It is graduated, the smaller width of the strip being 0.3 cm; the larger 0.6 cm. The 3.7 cm long hook is composed of a 0.3-cm-wide strip of metal rectangular in cross section, bent double on itself with a ring formed at the bend to go over the ring.

Figure 11.18 Fibulae.



Crossbow Fibulae

Two nice Late Roman period crossbow fibulae (Objects 543 and 593) were found in Tomb F.4. Both are about the same size and shape, but the crosspiece on Object 543 (fig. 11.18:5) is less ornate. There are two plain rings at the knobs below the onion finials. The original pin is still intact, and though corroded, it is clear that it was attached to the crosspiece by a loop that enabled it to move rather freely. The length of the pin from the top of the loop to the point is 4.5 cm. The top or bow finial is not as pronounced in its onion shape as Object 593. The foot below the bow has raised elements that indicate a design. A slightly curved slit in the foot, beginning where it meets the bow, forms the catch for the pin.

The corroded patina on Object 593 (fig. 11.18:6) reveals an original, shiny brass surface. The onion shape of the finials is more pronounced than on Object 543; their heads being more finely pointed. Two small rings with openings in their circumferences are placed on the crosspiece on either side of the bow. They are ribbed with delicately shaped waisting around them. Perhaps they were simply decorative or had some useful function if the object was suspended by a cord or clamped onto a metal wire. Where the opposite end of the bow joins the foot (near the clasp slit) is a U-shaped ring with cross-ribs similar to circular ones at the base of each onion.

Parallels

Eight crossbow fibulae were found at the Roman Cemetery at Lankhills where coins and pottery date the graves from 300-410 A.D. Clark (1979: 257) notes that developed crossbow type appears at the end of the third century A.D. (Late Roman period). They were part of the standard equipment of Roman military officers and civilian officials during the fourth through sixth centuries A.D., being common in the Roman frontier provinces on the continent, although there is no proof that all fibulae of this type were official insignia (Clark 1979: 257, 262). Clark's typology is a revision of Keller's earlier (1971) work which was based on Hungarian coin-dated fibulae. He believes that "the basic typological development of the fourth-century crossbow brooches seems to have been remarkably consistent over wide areas of the Roman Empire" (Clark 1979: 257).

Objects 543 and 593 from Hesban appear to be most like Clark's Type 3 (1979: 257-58), which is dated to ca. 340-360 A.D. This type characteristically has a narrow crosspiece with a rectangular or trapezoidal cross section and the decoration running out from the bow; onion-shaped knobs, and a bow that is thinner and narrower in cross section than the foot, which is longer than the ornamented bow. Object 13 at Lankhills is similar to Hesban Object 593, but has beaded basal mouldings and was once completely gilded. In regard to the gilt, Clark (1979: 263) says: "At the end of the fourth century, crossbow brooches seem to have become less common and generally to have been gold or gilt bronze rather than plain bronze. This suggests that they were then restricted to the wealthier or more prominent." For other third- and fourth-century A.D. fibulae in gold and bronze with gilt, see Marshall (1911: 337, pl. 62). Object 532 at Lankhills resembles Hesban Object 543.

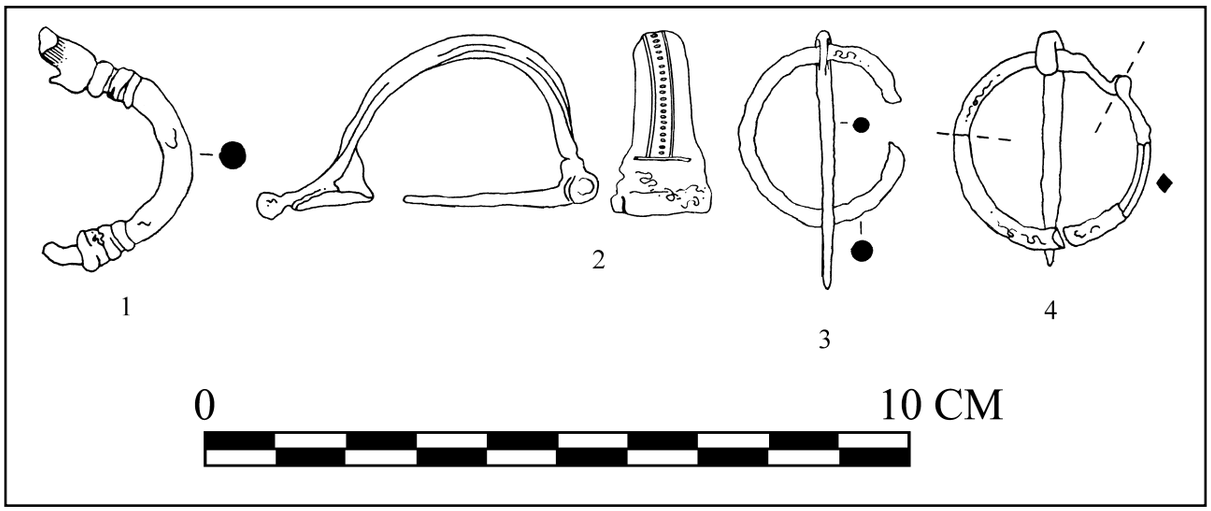
Other parallels are known from Cappadocia (Chantre 1898: figs. 176-77). There are also three fibula (nos. 28-30) in the British Museum (Brailsford 1964: 20, fig. 10) with acorn finials that are similar in terms of their pins and clasps to Hesban Objects 543 and 593. They have the cross-ribbed rings at the base of the finials, but the foot and bow are more elaborately decorated. They date to third-fourth centuries A.D. Object 2781 from Corinth, also dated to the fourth century A.D. (Davidson 1952: 271, pl. 113), is similar. A gilt bronze fibula from the so-called "Masonry Tombs," a ca. third-century A.D. family mausoleum in Jerusalem (Iliffe 1934: fig. 1, Tomb 1a.), is similar to Hesban Object 593.

Other Fibulae

Object 1343 (fig.11.19:1) resembles Stronach's (1959: 187) semicircular fibula Type I_3, which have single or multiple ribs at the base of each arm. They are a peculiar, miniature form, that seems to have spread over a surprisingly wide area and were almost as popular in Babylonia as in Palestine. Stratified examples appear to be seventh century B.C. or later.

Object 2040 (fig. 11.19:2) is a bronze fibula with all but a small fragment of the pin intact. There is an incised design running down the middle of the bow. Its foot near the catch plate has a terminal knob. At the spring the bow ends in three ridges, now corroded. Its basic shape resembles Stronach's

Figure 11.19 Fibulae.



(1959: 186) Type I_2, a semicircular fibula with plain bow, which dates from the 12th to the 6th centuries B.C. An object quite similar to Object 2040 with an incised design running down the middle of the bow was found in a tomb on the site of the Palestine Archaeological Museum (Rockefeller), in Jerusalem, dated by coins to ca. A.D. 60-70. The name "AVCISSA" was incised on this fibula, making it a type that the is known from western Europe and England, possibly belonging to a Celtic soldier from northern Europe employed in the Syrian armies (Iliffe 1938: 21, fig. 3).

Object 2552 (fig. 11.19:3), is a bronze garment pin that may be designated as a type of fibula. It is actually closer to a toggle pin. The straight stave would pierce the cloth in two places and the crescent would act like the wrapped string to hold the stave in place. From the top of its loop, the stave measures 3.8 cm. The crescent is 2.5 cm in diameter, with an 0.4 cm opening between the slightly narrowed ends.

Object 2774 (fig. 11.19:4) is similar to Object 2552. It is also a garment pin of the same type. Its basic shape is round, with a diameter of 2.9 cm and a 3.4 cm-long looped stave.

Parallels

Parallels can be found among the so-called "penannular brooches" in the British Museum collection from Roman Britain (Brailsford 1962: 22, fig. 12.48-51). Other parallels from Roman Britain can be found at the site of Cadmulodunum (Colchester); cf. Hawkes and Hull (1947: 326, fig. 59).

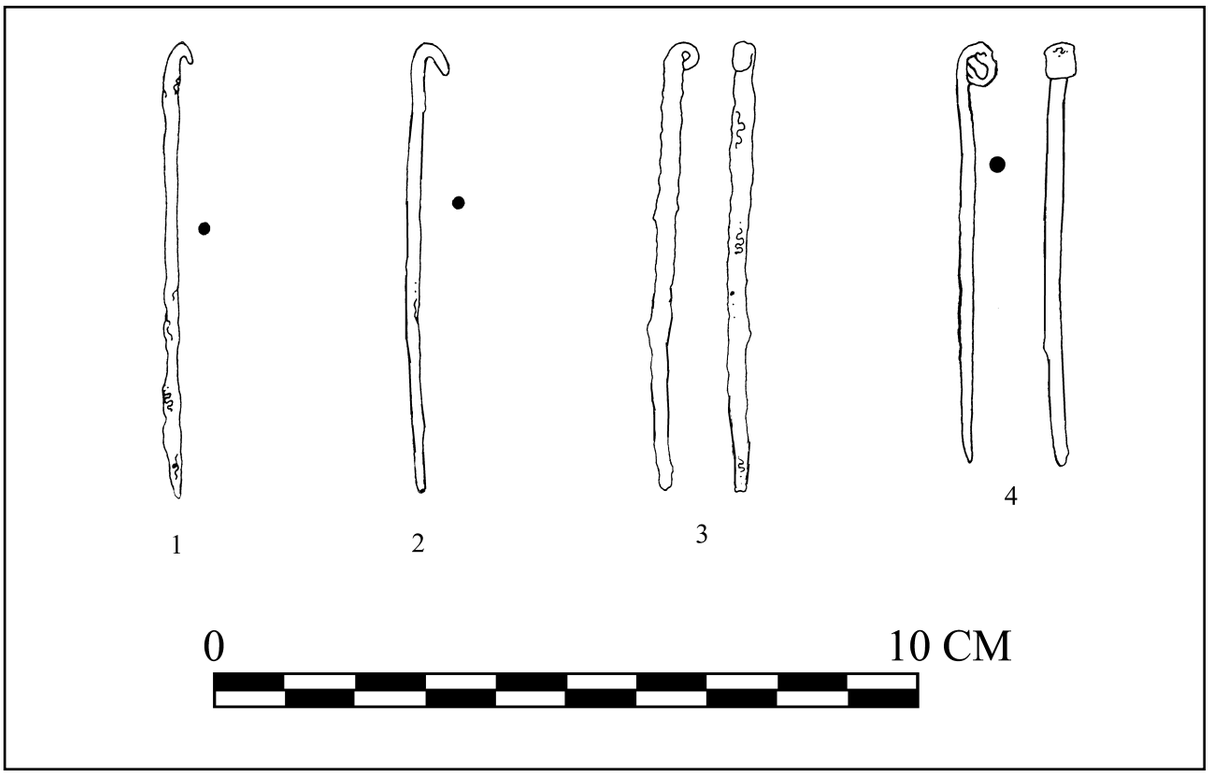
Garment Pins

Garment pins (Table 11.11) other than toggle pins, which were not found at Hesban, consist of a shaft with a looped or hooked head. Artifacts of this kind include Objects 239, 240, 770 and 1364

Table 11.11 Garment Pins.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
239	B.1:42	15/16	bronze	L 6.4; dia .2	DAJ; sharp tapered point; hook? at head, textile use?
240	B.1:38	15/16	bronze	L 6.89; dia .2	DAJ; cf. 239
770	B.2:19	9	bronze	L 6.5; dia .27	loop-headed; straight stave; tip tapered
1364	B.3:58	14	bronze	L 6.0; dia .22	loop-headed; straight stave; tip tapered

Figure 11.20 Garment Pins.



(fig. 11.20:1-4), which on the basis of parallels at Garar (Petrie 1928: 14) seem to have been used for making a kind of network pattern by knotting the hook to pull thread through a loop, and the point for loosening and regulating the knot.

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Chapter Twelve

THE COSMETIC OBJECTS FROM TELL HESBAN AND VICINITY

Elizabeth E. Platt

Chapter Twelve

The Cosmetic Objects From Tell Hesban and Vicinity

Introduction

Objects found at Hesban that were used for cosmetic purposes include spoons, spatulas, applicators, kohl sticks, rods, and various containers.

Spoons

Cosmetic spoons (Table 12.1) consist of a bowl on one end of a slender rod on the other. Of the 13 objects and fragments that fall into this category, five (Objects 79, 884, 1747, 1849 and 2212; fig. 12.1:1-5) are similar in size and shape. The round bronze rod is flattened, and thus widened at one end, where a shallow bowl is hammered into place. Objects 79, 2212 and 662 (fig. 12.1:1, 5 and 6) have a stamped or hammered design in the flattened area just above the bowl. Objects 884 and 1747 (fig. 12.1:2 and 3) have no visible decoration. Whole objects measure from ca. 11 to 15 cm in length, with bowl widths from 0.56 to 0.88 cm. Three other spoons (figs. 12.1:7; 12.2:1-2) have greater length: Object 674 is 19.5 cm; Object 685, 16.0 cm; and Object 2491, 17.47 cm. They seem to have a kohl bulb on the opposite end. Object 1638 (fig. 12.2:3) is an ivory spoon with a heart-shaped spatulate "bowl" and a band carved close to it. The opposite end is broken off. The extant length is 12.10 cm, its bowl width being 2.16 cm. Five artifacts within this category date to the Middle Islamic period.

Table 12.1 Cosmetic Spoons.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
79	C.1:4	3	bronze	L 6.28; spoon bowl width .88	DAJ; frag.; coppery shine; stamped design not clear; spoon bowl well hammered
662	C.5:2	3	bronze	L 15.10; bowl width .77	stamped design clear above spoon bowl on flattened segment
674	F.6:7	—	bronze	L 19.5; bowl width .95	DAJ; kohl bulb on opposite end; engraved rings on stave near spoon
685	F.6:3	—	bronze	L 16.0; bowl width .90	spoon area is a long 4.32 cm; bowl seems "folded" lengthwise; may have kohl bulb on end
884	C.4:8	2-3	bronze	L 10.87; bowl width .56	pointed end
1638	A.7:74	5	ivory ?	L 12.10; spoon width 2.16	DAJ; frag.; unusual cosmetic heart-shaped spoon; spatulate "bowl" and band close; opposite end missing
1747	C.3:44	?	bronze	L 10.06; bowl width .85	corroded frag.
1849	D.3:80	13	bronze	L 41; bowl width .63	small corroded frag.
2212	C.8:16	2-3 ?	bronze	L 12.5; bowl width .81	stamped decoration just above the bowl
2316	A.10:4	1-2	bronze	L 12.40; bowl width .79	DAJ
2334	C.7:47	6	bronze	L 12.6; bowl width .7	kohl bulb on opposite end; cf. Kohl sticks
2464	C.8:11	2	iron	L 3.68; bowl width .79	corroded small frag.
2491	F.27:9	—	bronze	L 17.47; bowl 1.25	DAJ; bowl bent backwards; kohl lobe on opposite end; long bowl 4.91 cm; rings above bowl; center fold length wise on bowl

Figure 12.1 Cosmetic Spoons.

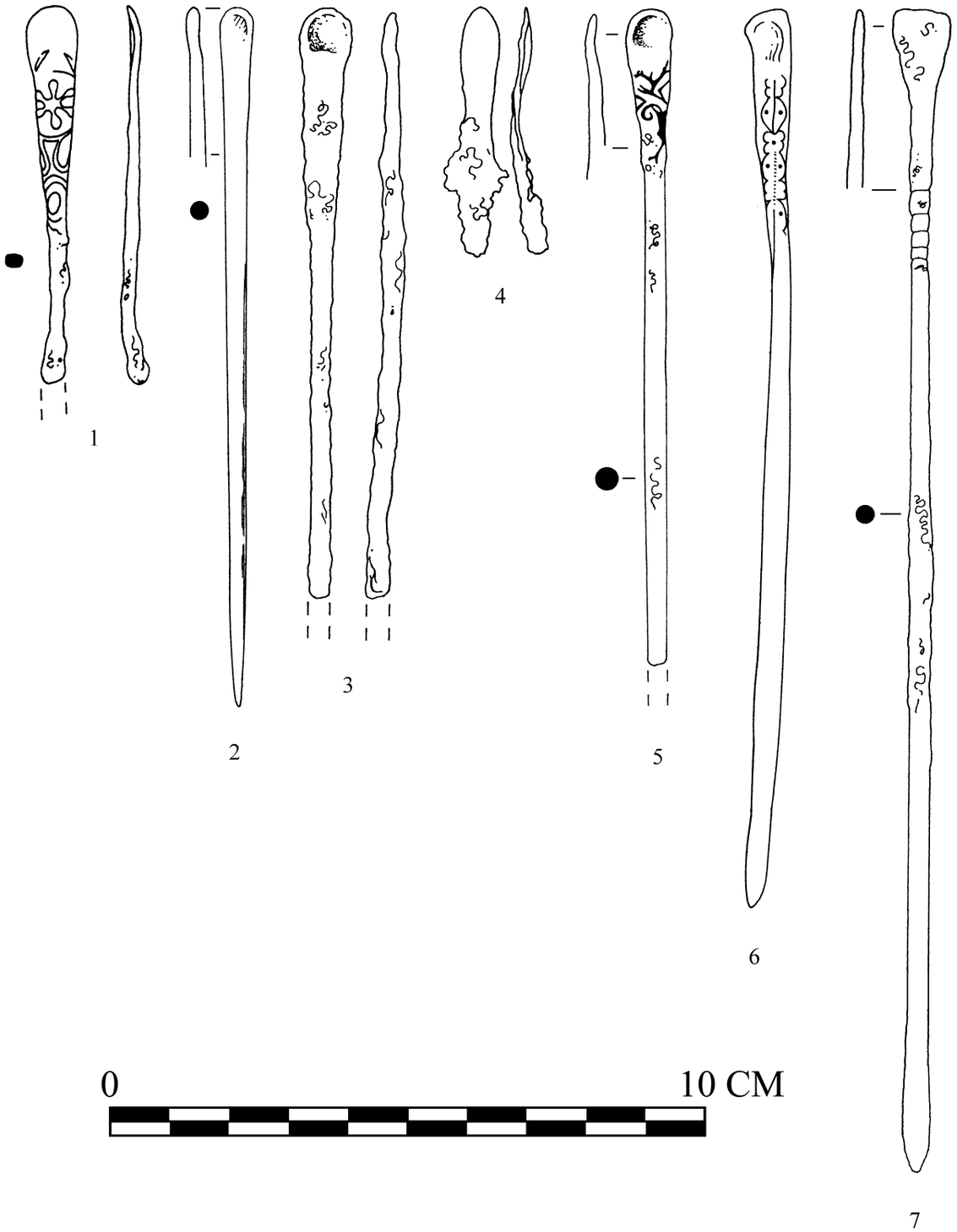
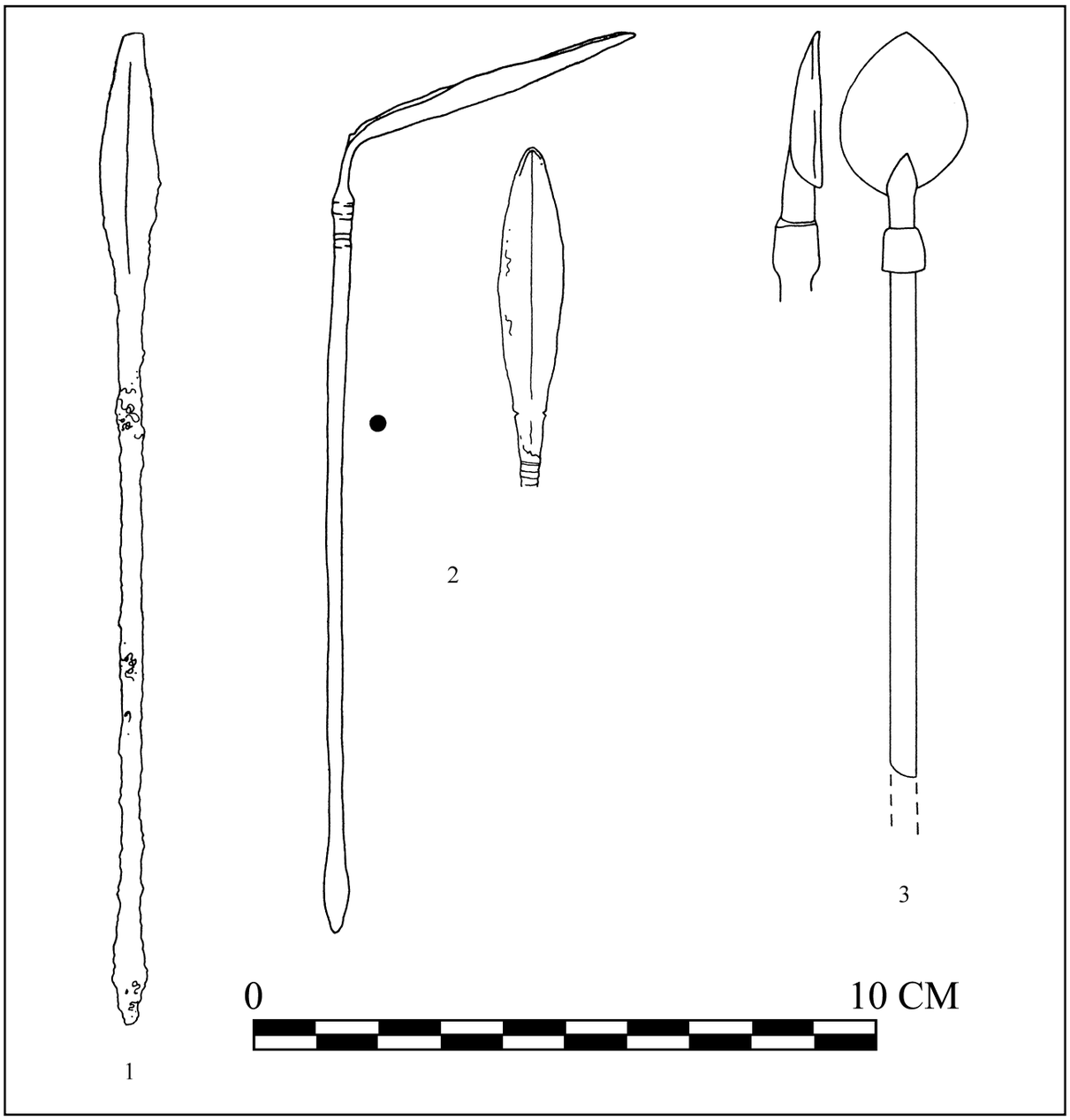


Figure 12.2 Cosmetic Spoons.



Parallels

Davidson (1952: 181) refers to cosmetic and unguent spoons which have small circular bowls at the end of a shaft, the purpose being to dip out powders and unguents.

Object 1638 is similar to Corinth unguent spoons 1332 and 1333 which are made of bone or ivory with oval, pointed bowls, and circular shafts with rings cut near the bowl (Davidson, 1952: 182, pl. 82). An object from Samaria with a collar at the junction of the bowl and handle (Crowfoot,

Table 12.2 Cosmetic Spatulas.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
10	A.2:5	3	bronze	original L. 10.61 cm; spatula width 1.3 cm	ovoid spatula is bent over itself; flat stave is bent
262	D.33:11	9	bronze	orig. L 12.86; spat. W .56	spatula is currently bent up; kohl bulb at opposite end
296	C.3:	unstrat.	bronze	L 14.5; dia of rod .36; spat. W .50	one end is hammered flat
426	C.4:39	3	bronze	L 7.3; spat. W .73	corroded; stave broken off; may be a writing stylus; cf. 1457
652	B.1:84	15-16	bronze	L 10.8; spat. W .87	kohl stick opposite end? may also be a writing stylus
910	D.1:48	13	bronze	L 19.3; spat. W 1.35	long; spatula part broken; kohl bulb on opposite end
976	C.1:56	14	bronze	L 10.68; spat. W .70	may be a writing stylus
1001	F.10:8	—	bronze	L 18.5; spat. W at shoulders 1.2; spat. L 5.7	DAJ; complete object in beautiful condition; kohl bulb on end
1383	D.4:7	3	iron	L 9.8 cm; spat. W 2.1	frag.; corrosion obscures object
1457	F.14:8	—	bronze	L 9.87; spat. W .50	frag.; slender flat, ovoid spatula; opposite end broken off
1497	D.3:33	9	bronze	L 11.85; spat. W .85	frag.; spatula may be broken off; opposite end is pointed; may be a writing stylus; cf. 426
2816	C.8:44	3 ?	bronze	L 5.5; spatulate at each end .5 in width	a short cosmetic spatula with specific use as an ear pick

Crowfoot and Kenyon 1957: 457, fig. 114:1-4) is also similar. Objects 79 and 2212 resemble a spoon from Tell Siran (Thompson 1973: 14.3; pl. 2.2), and Objects 685 and 2491 are parallel to a cosmetic spoon that has a bowl with a lengthwise "fold" from Tell en-Naṣbeh (Harrison 1947, pl. 105:12, M 1740).

Spatulas

Spatulas (Table 12.2) are identified by the flattened end of the stick, which can be ovoid, rectangular, or a round, thin shaft, sometimes with a kohl bulb on its opposite tip. Artifacts of this type include Objects 10, 262, 296 and 910 (fig. 12.3:1-4) and Objects 1001, 1383 and 1457 (fig. 12.4:1-3). Their use was probably for mixing kohl powders with liquids on a flat, palette surface. Their slender shafts enabled the instrument to reach down into a tube-shaped container.

The best example at Hesban is Object 1001 (fig. 12.4:1). It measures 18.5 cm in length. The spatula itself is a flattened area with shoulders sloping outward from the shaft. Engraved rings decorate the shaft just above the shoulders. The form on the opposite end is a kohl bulb, measuring 0.50 cm at its widest cross section. It was found in tomb F.10 and is Late Roman period in date.

Four of the smaller objects (426, 652, 976, 1497) identified here as spatulas have widths of only 0.70 to 0.85 cm, and may have actually been writing styli with a simple tapering point at the opposite end.

Parallels

Hesban Object 910 (fig. 12.3:4) is similar to one from Tell en-Naṣbeh (Harrison 1947: 265; pl. 105:10, 11, M1879 and M 1875), see also Harrison (1947: 265; pl. 105:7; M 2421) for another possible parallel from the same site. Davidson (1952: 181) refers to "spatulate instruments" from Corinth, the working end of which is flat. These however, may have been used for medical purposes. On the basis of Petrie (1927: pl. XIII), Hesban Object 2816 (fig. 12.4:4) should probably be identified as an "ear pick." It is a bronze object, measuring 5.5 cm in length. A possible parallel from Corinth is Object 1319, which is a described as a bronze "ear spoon" (Davidson 1952: 1821-82; pl. 82).

Figure 12.3 Cosmetic Spatulas.

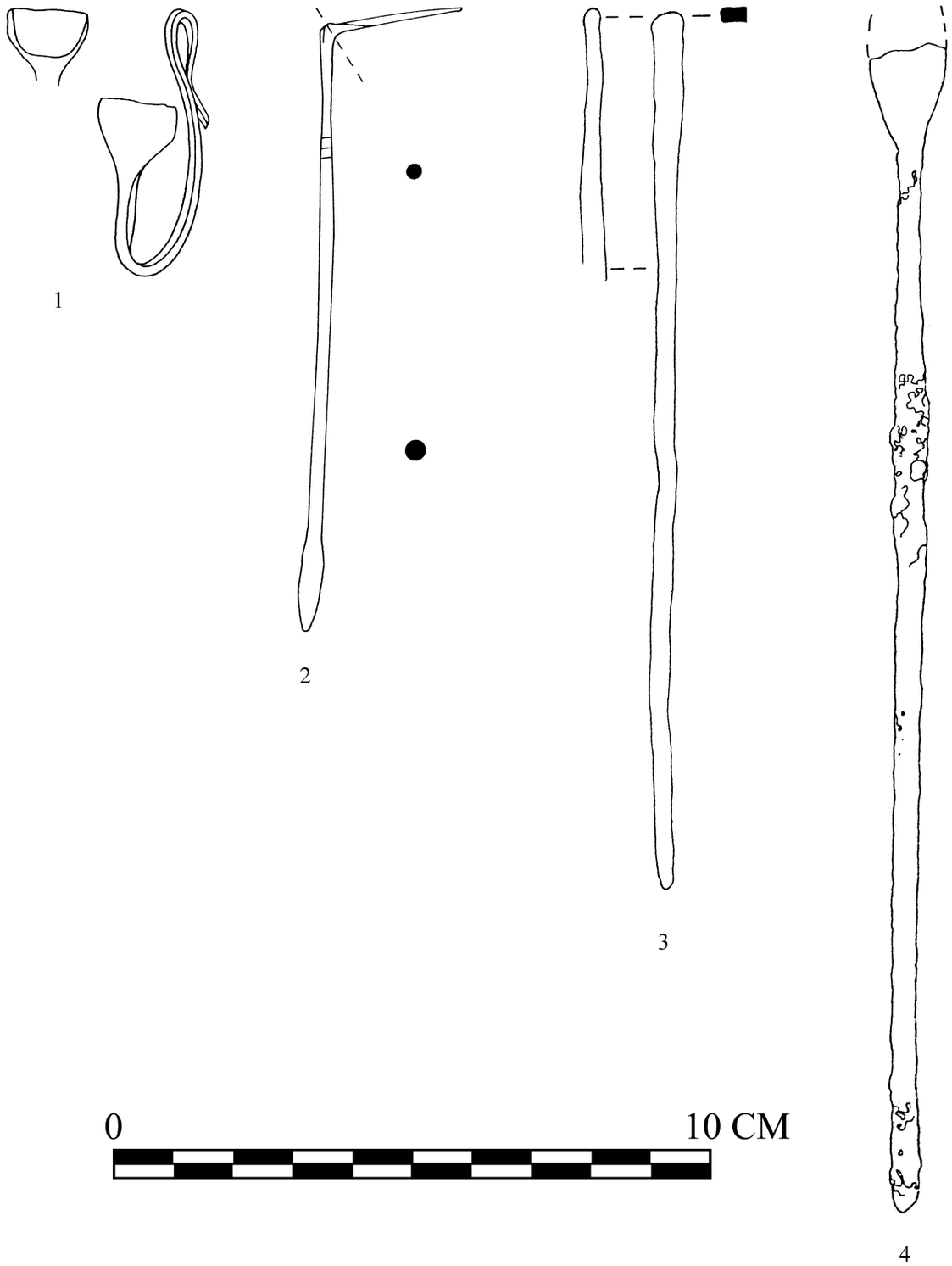


Figure 12.4 Cosmetic Spatulas.

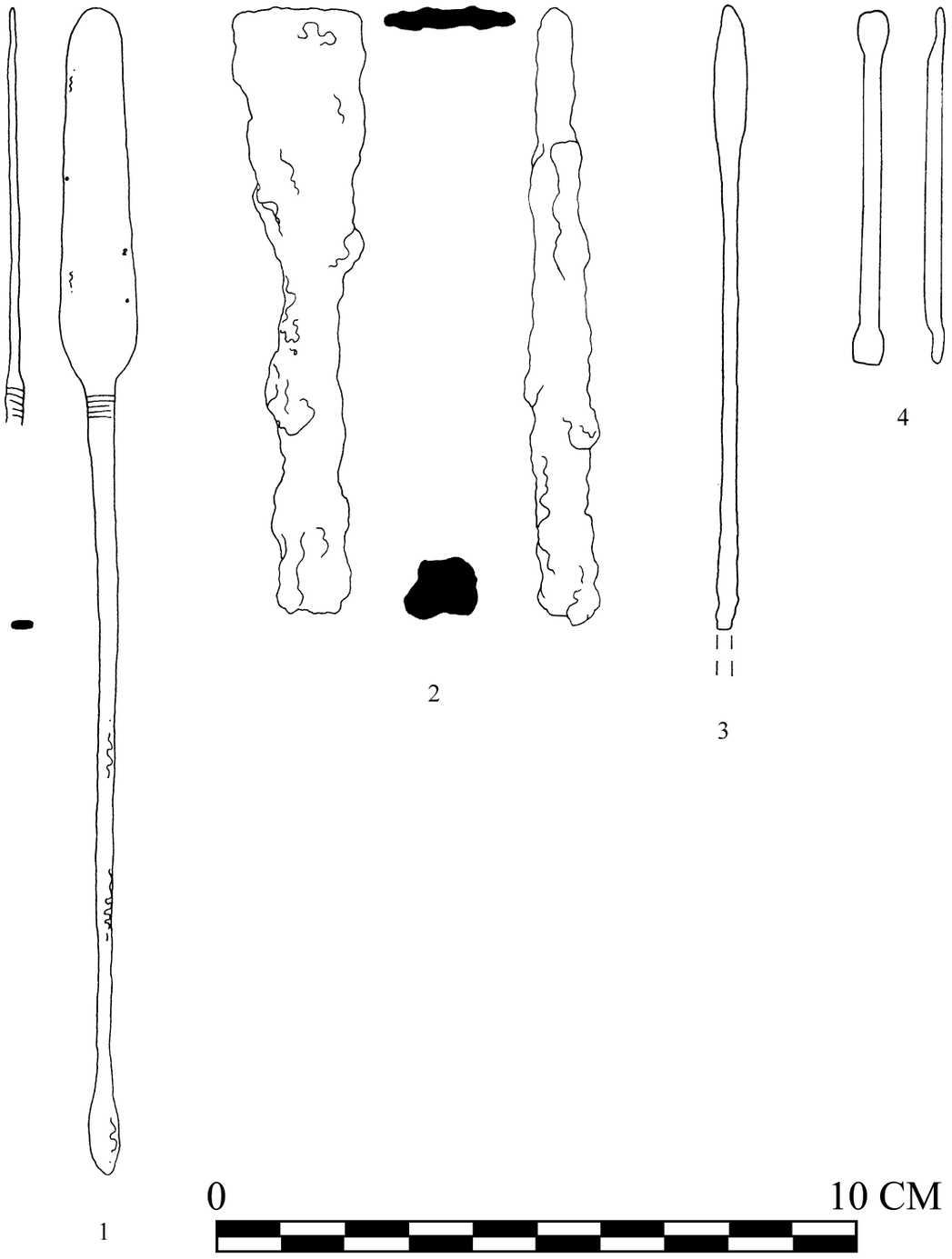


Table 12.3 Cosmetic Applicators.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
596	F.6:2	—	glass	L 16.82; ball tip crosssection .79	DAJ; shaft graduated; larger end toward ball tip; oval frame and knob at top; twisted fabric; color: 5Y 7/2 "yellow-gray"; translucent
673	F.6:11	—	glass	L 7.6	DAJ; frag.; shaft with twists at ends; square crosssection .34 cm; perhaps applicator; color: 5Y 8/1 "yellow-gray"; translucent
684	F.6:7	—	glass	L 9.62	frag.; shaft with twists at ends; square crosssection .40 cm; similar to 673; clear translucent
1505/ 1508	F.16:5	—	bone	L 10.74	carved, decorated frags.; may have frame & knob top; cf. 596 & 2343
2083	B.4:263	14	ivory	L 11.59; dia .75	DAJ; probably related to hairpins; pointed end, flat top; unusual object shape at Hesban; rings & cross-hatching
2343/ 2651	F.27:7 F.27:8	—	bone	L 10.27; dia 2.06	carved, decorated frags.; oval frame & knob at top; cf. 596 and 1505
2691	F.27:23	—	bone	L 8.4; cross-section .8	no decoration; frag. of oval frame at top; cf. 1505 & 2343

Applicators

Cosmetic applicators (Table 12.3) such as Objects 1505/1508, 2343/2651, 2691 (fig. 12.5:4, 6-7) all have oval frames and a knob or a piece suggesting it. The shaft may have been for reaching into tube-shaped bottles; the tip, for obtaining and dabbing liquids, and the enigmatic frame for suspension of an object by a tape or peg.

Glass Object 596 (fig. 12.5:1) has a graduated shaft, ball tip, and oval frame with a knob at the top. The shaft has striations made from the twisting of the glass, a "yellow-grey" transparent color (Munsell number 5Y7/2). The shape of this complete object suggests the same classification for two other glass shaft-fragments (Objects 673 and 684; fig. 12.5:2-3).

Parallels

Objects 2343/2651, 2691 date to the Late Roman period and can be compared to a bone handle from Corinth (Object 2389), that Davidson (1952: 287; pl. 119) dates to the Roman period, but for which she finds no precise purpose. This object is a fragment of an angular frame with an oval cut-out center and an incised decoration at the beginning of the shaft. She suggests, by analogy with another object, that the missing end had a human figure.

Petrie (1927: 24, 28; pls. 19:64 and 23:67) shows two bone utensils of similar type. Both are dated to the Roman period and have a figure of Aphrodite, who is standing with her feet toward the circular frame at the opposite end of the instrument. One hand and arm covers her breasts; the other, her pubic area. The head is rounded in such a fashion that it could possibly be used as an applicator. Another possible parallel comes from the excavations at Siphnos (Brock and Young, 1949: 84; pl. 25.5).Other parallels include one from Alishar Hüyük (von der Osten:1937, fig. 102d. 1047).

Another Type of Applicator

Ivory pin (Object 2083; fig.12.5:5) is one of the most outstanding finds from Hesban. It is in excellent condition and reflects exquisite craftsmanship. The decorated upper portion is carved with two ridges on either side, made from three rings. There are also two sections of cross-hatching, each meeting at a ring in the center, forming a fifth ridge. The upper portion is slightly graduated, with the top or head area being slightly smaller. The opposite end is a beautifully tapered point. The color is between 10YR7/4 "greyish-orange" and 10YR8/6 "yellowish-orange."

Figure 12.5 Cosmetic Applicators.

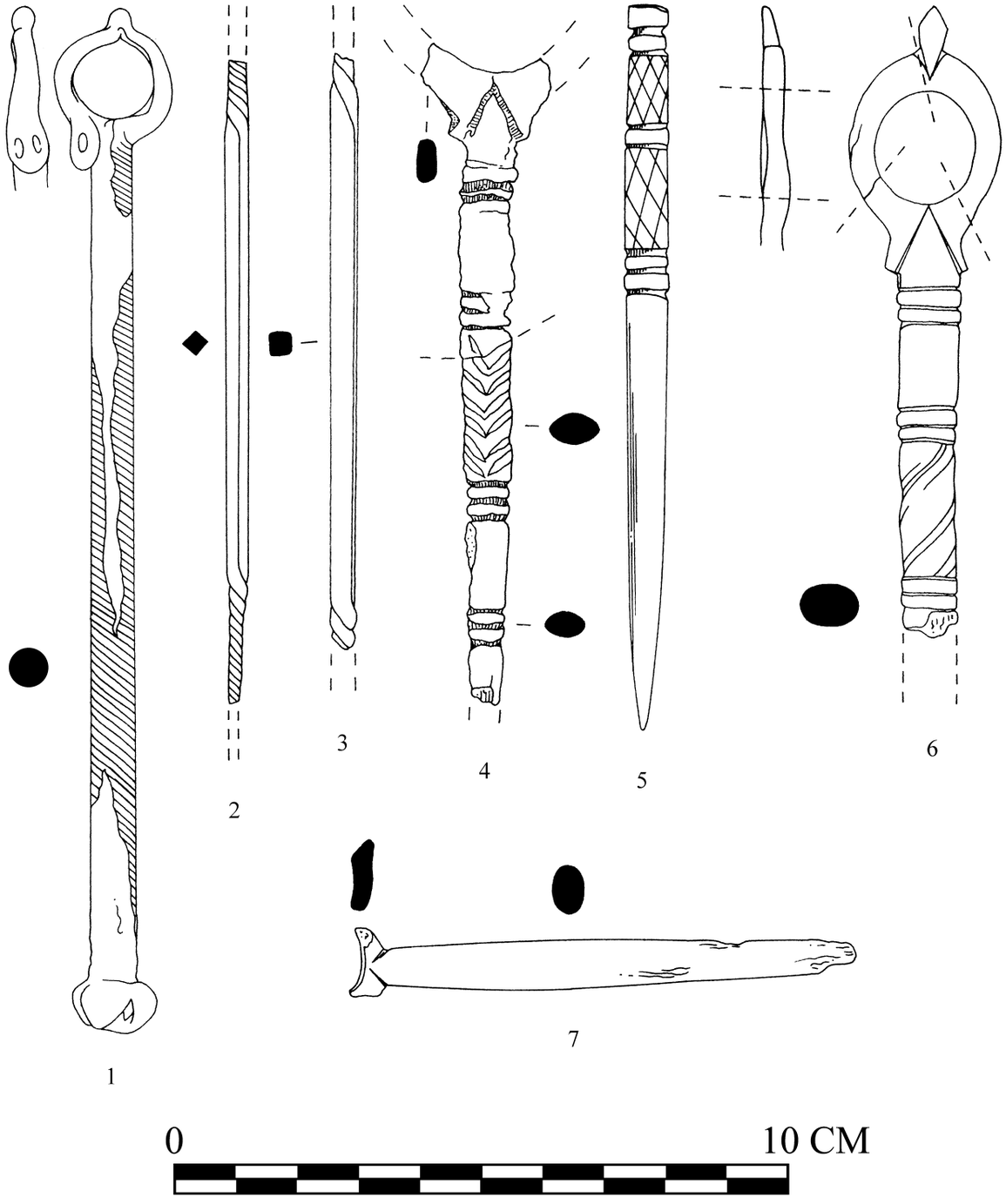


Table 12.4 Bronze Kohl Sticks.

Object No.	Locus	Stratum	Dimensions	Remarks
77	C.1:4	3	L 4.7 cm; bulb dia .43	frag.
624	F.6:6	—	L 10.5 cm; bulb dia .40	stave decorated with fine rings, corrosion obscures
1207	C.4:52	6	L 10.3 cm; bulb dia .49	well-defined bulb; two rings midway on stave
1604	F.18:21	—	L 9.56 cm; bulb dia .36	twists on upper end; small mixing spatula on opposite end
1621	F.18:22	—	L 13.8 cm; bulb dia .45	corroded frag.; originally had spatula on opposite end
1756	D.3:57B	14	L 9.81 cm; bulb dia .55	very encrusted; opposite end may be flattened
1848	D.3:80	13	L 10.3 cm.; bulb dia .50	corrosion obscures opposite end; may have had a mixing spatula
2334	C.7:47	6	L 12.6 cm.; bulb dia .57	has an inner core; opposite end has a spoon

A similar object was found at Corinth. Davidson (1952: 280) notes that these kinds of pins numbered in the hundreds during the Byzantine period and are distinguished by their incised decoration on the upper end. Corinth Object 2358 looks very much like Hesban Object 2083, except that the top is even narrower. It is believed that the origin of this type of pin, which is heavier and longer in comparison to the lobe-headed bone hairpins, was in the Roman period. Object 2083 is larger, thicker, and heavier than all of the other bone and ivory hairpins from Hesban. If it was used to dress the hair, perhaps with the aid of oils or pomades, it would fit rather nicely as "cosmetic applicator," hence its classification here.

Kohl Sticks

The chief characteristic of kohl sticks (Table 12.4) is the bulbous end to their rods. Some are spatulate at the opposite end. Petrie (1927: 26, 28, pl. 23) was among the first to identify these objects and gives examples of both styles.

Complete kohl sticks (Objects 1207, 1604, 1756, 1848 and 2324; fig. 12.6:3-4, 6-8) from Hesban range from 9.56 cm to 12.6 cm in length, with bulbs from 0.36 to 0.57 cm at the widest point of the cross section. The most elegant is Object 1604 (fig. 12.6:4), a comparatively short and slender example with twists near its spatulate end. Two nearly complete kohl sticks (Objects 624 and 1621; fig. 12.6:2, 5) and one identifiable fragment (Object 77; fig. 12.6:1), belonging to this type, have also been found. They span from Early Roman to Middle Islamic period in date.

Double-ended Kohl Sticks

Like the kohl sticks described above, the double-ended type (Table 12.5) were made of bronze. The extant whole forms (Objects 90, 157, 787 and 2337; fig. 12.7:1-4) average between 13.5 and 14.0

Table 12.5 Bronze Double-ended Kohl Sticks.

Object No.	Locus	Stratum	Dimensions	Remarks
42	C.1:2	3	L 6.04; dia .30	end frag.
51	C.1:4	3	L 6.54; dia .30	frag.; ridges only; most of middle section missing; one end present
82	C.1:4	3	L 5.95; dia .39	end frag.
83	C.1:4	3	L 7.91; dia .35	DAJ: frag.; middle section present; squared with notches; one end present
86	C.2:8	3	L 6.94; dia .36	frag.; middle section present; ridges and rings; one end present

Table 12.5, *continued.* Bronze Double-ended Kohl Sticks.

Object No.	Locus	Stratum	Dimensions	Remarks
89	C.1:4	3	L 11.13; dia .39	frag.; middle section present; ridges, rings and squared; one end present
90	C.1:4	3	L 13.5; dia .42	middle section 1.96 DAJ: complete; middle section squared with notches
91	C.1:4	3	L 13.5; dia .42	middle section 1.68 complete; slightly bent; middle section squared with notches
157	C.2:9	?	frag. 1 L 4.64; dia .32; frag. 2 L 5.33; dia .32	two end frags.
163	C.1:4	3	L 6.34; dia .39	end frag.
164	C.1:5	3	L 6.04; dia .36	end frag.
166	C.1:5	3	L 7.4; dia .38	DAJ; end frag.
167	C.1:5	3	L 6.41; dia .43	end frag.
168	C.2:9	3	L 6.48; dia .26	end frag.
210	C.1:6	3	L 5.62; dia .32	end frag.
224	C.1:6	3	L 6.72; dia .30	DAJ; frag.; ridges only; most of middle section missing; one end present; cf. 51
259	C.1:6	3	L 8.12; dia .31	DAJ; frag.; may be unfinished in middle section
521	C.4:19	3	L 7.6; dia .39	frag.; middle section squared with notches; one end present
787	C.5:3	3	L 14 cm; dia .40	whole object; but bent in middle section; crudely carved; perhaps bent in the formation process
789	C.5:2	3	L 4.27; dia .89	end frag.
1470	A.7:38	3	L 6.35; dia .30	frag.; middle section squared with notches; one end present
1664	G.3:24	—	L 5.8; dia .30	frag.; middle section squared with notches; one end present
2207	C.5:84	cleanup	L 10.26; dia .40	frag.; middle section squared with notches and unusually long; ca. 2.48 cm; one end present
2240	C.5:89	3	L 7.48; dia .34	frag.; middle section squared with notches; one end present
2337	C.5:94	3	L 14.03; dia .33	whole object; middle section squared with notches; perhaps unfinished
2384	C.5:101	3	L 5.96; dia .41	end frag.
2526	C.5:134	3	L 4.05; dia .40	frag,; middle section only; squared with notches
2547	C.5:113	3	L 8.86; dia .30	frag.; middle section squared with notches; one end present

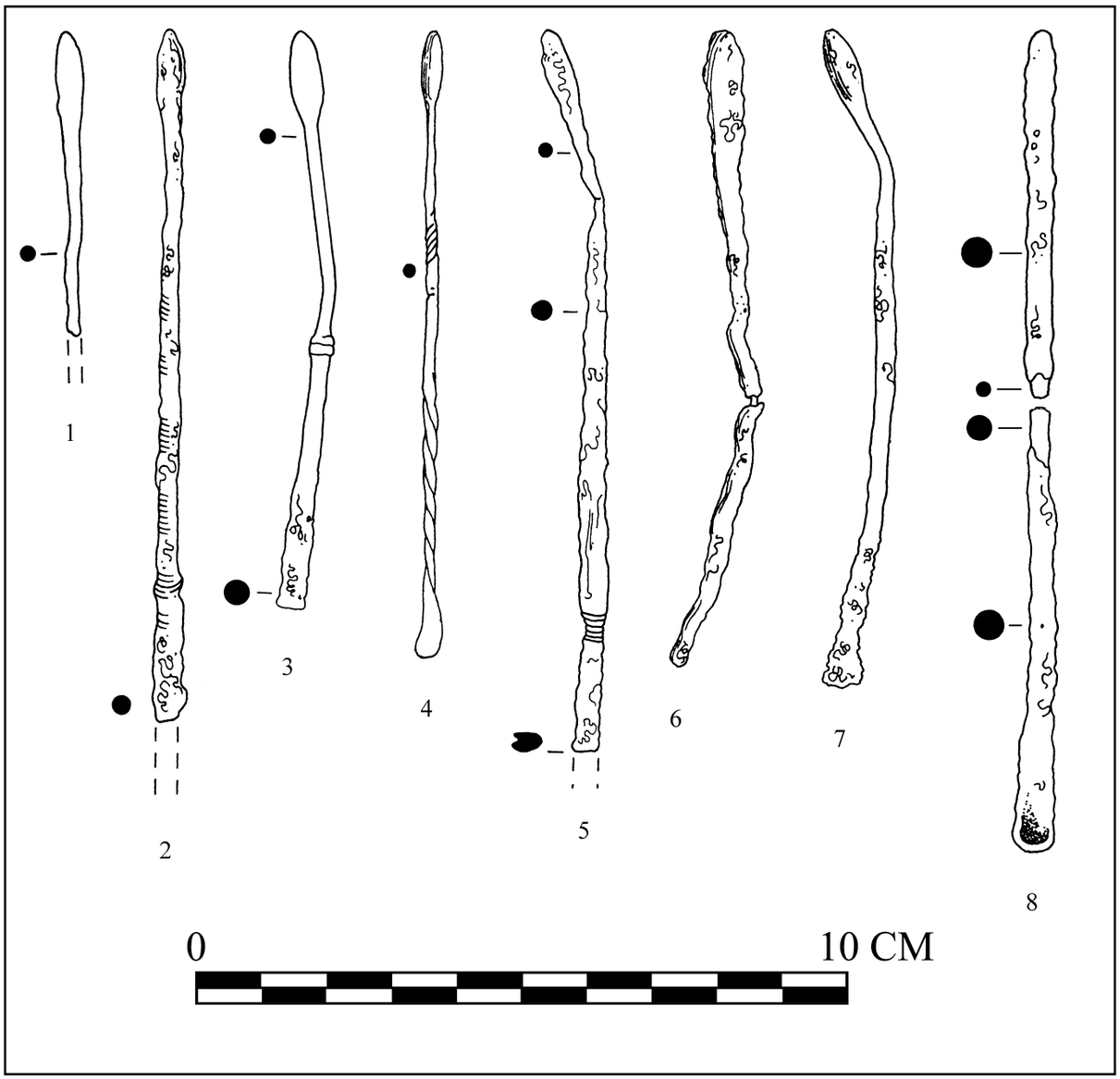
cm. However, one fragment (Object 89; fig. 12.8:3) represents a middle section and one stave end, which now measures 11.13 cm. It would, therefore, probably have originally belonged to an artifact 21.6 cm long. The diameter, measured on the stave just below the middle section of these objects, averages between 0.30 and 0.40 cm. On some pieces (e.g., Object 521; fig. 12.8:5), there seems to be a very slight expansion nearer the stave end, before a point. Corrosion obscures many of the points; but in comparison to other pins and needles in the Hesban corpus, these are more blunt.

The basic design of the middle section is a squared-off cross section with notches along the edges. However, on some, the middle section is still rather round in cross section and has what appears to be ridges or rings on each of its sides (Objects 86, 259; figs. 12.8:2 and 12.7:5). Perhaps these were in the process of being made into a more squared-off motif.

Many of the fragments show breakage right at the place where the middle section joins the straight stave (Objects 51, 86, 89, 224, 521, 1470, 1664, 2240, 2526 and 2547; fig. 12.8:1-10). Some of the extant end fragments are long enough to have been broken off right at that juncture. Virtually all of these objects were found in Area C and date to the Middle Islamic period.

The number of objects from this same area and stratum, the unfinished nature of some, and the pattern of breakage suggest a factory or shop for crafting these objects nearby.

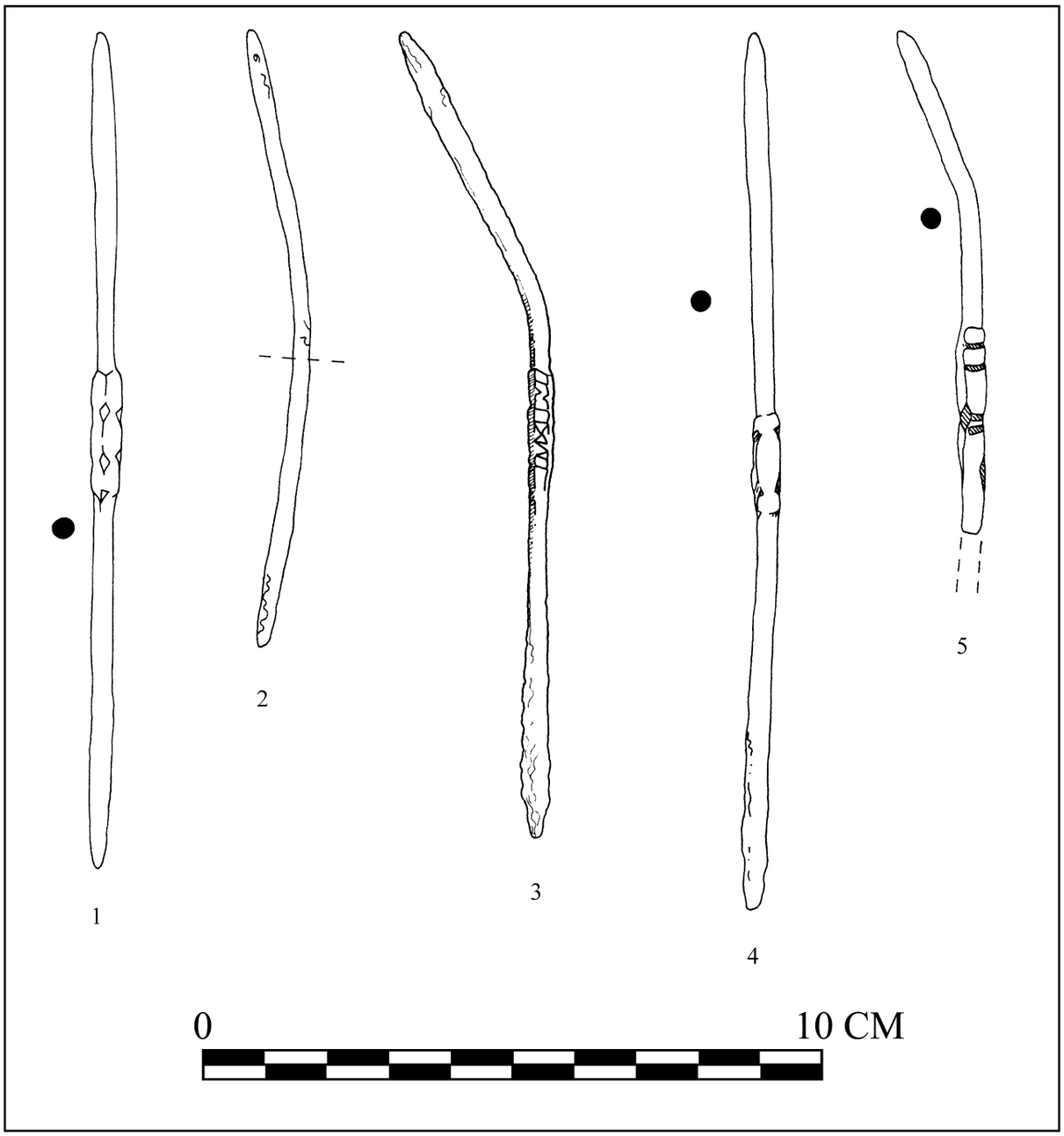
Figure 12.6 Bronze Kohl Sticks.



Double-ended Rods

A number of variously-featured metal rods (Table 12.6) are assumed to have had some kind of cosmetic function. Four whole Objects 226 (fig. 12.9:1), 892, 2072, 2546 are bronze rods with two tapered but rather blunt ends. Their lengths range from ca. 11.15 to 13.87 cm and their diameters average 0.35 cm. Six fragments, including Objects 88 and 1927 (fig. 12.9:2-3), appear to belong to similar objects. Six of these 11 rods and fragments date to Middle Islamic period.

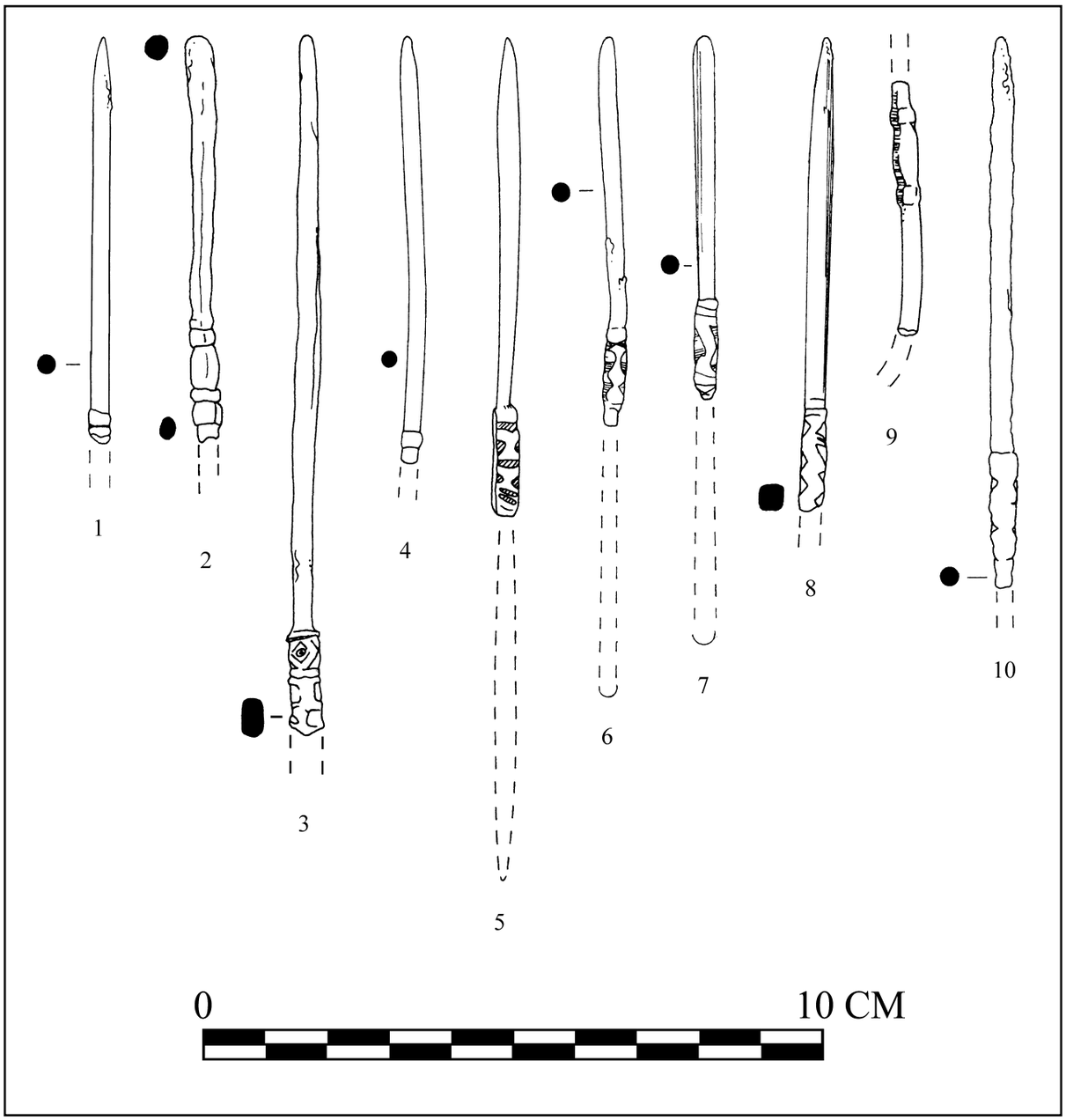
Figure 12.7 Bronze Double-ended Kohl Sticks.



Single-ended Rods

There are four rod-like fragments of bronze (Table 12.7) whose single ends come to a tapered but blunt tip. Object 2655 (fig. 12.10) is illustrative. Their diameters at widest point range from 0.27 to 0.4 cm. All of these objects date to the Middle Islamic period.

Figure 12.8 Bronze Double-ended Kohl Sticks.



Iron Rods

Ten corroded iron fragments (Table 12.8) appear to be cosmetic rods. Three slender rods including Object 1887 (fig. 12.11:1) have diameters of ca. 0.3 cm. The others such as Objects 421, 965, 2270a and 2270b (fig. 12.11:2-5) are thicker, with diameters of ca. 1 cm. Like the above rods, most date to the Middle Islamic period.

Table 12.6 Bronze Kohl Double-ended Cosmetic Rods.

Object No.	Locus	Stratum	Dimensions	Remarks
88	C.2:8	3	L 10.1; dia .39	frag.
226	C.1:6	3	L 12.76; dia .33	DAJ; whole, slightly bent
892	C.5:4	3	L 13.87; dia .35	whole
1927	D.5:43	8	L 6.51; dia .3	corroded frag.
2003	C.6:11	2	L 9.4; dia .34	frag.
2026	G.9:3	—	L 5.7; dia .33	frag.
2072	A.9:82	5	L 11.15; dia .36	whole
2205	C.1:119	—	L 4.73; dia .36	frag.
2311	B.4:283A	3	L 11.85; dia .41	frag.
2546	F.31:8	—	L 12.55; dia .35	whole
2648	C.8:25	3	L 11.07; dia .31	frag.

Table 12.7 Bronze Kohl Single-ended Cosmetic Rods.

Object No.	Locus	Stratum	Dimensions	Remarks
6	B.1:1	1-2	L 4.2; dia at W. .27	frag.; cf. 2655
1906	C.6:22	2	L 6.4; dia .4	frag.; cf. 2655
2421	C.5:103	3	L 8.5; dia .32	frag.; possibly double-ended kohl stick; cf. 2655
2655	C.6:43	3	L 5.33 cm; dia .3	frag.

Table 12.8 Iron Cosmetic Rods.

Object No.	Locus	Stratum	Dimensions	Remarks
376	B.4:1	2	L 10.54; dia .26	frag.; slender, somewhat corroded
418	B.4:1	2	L 11.93; dia .35	frag.; slender, somewhat corroded
421	C.4:22	3	L 8.2 dia 1.1	frag.; thick, very corroded
836	C.5:3	3	L 8.02; dia .73	frag.; thick, tapered; corroded
837	C.5:3	3	L 9.06; dia .84	frag.; thick, tapered; corroded
965	B.4:33	4	L 9.0; dia 1.1	frag.; thick, tapered; corroded
1887	C.6:16	2-3	L 8.4; dia .3	slender, somewhat corroded
2270a	C.5:89	3	L 7.4; dia .8	thick, tapered; corroded
2270b	C.5:89	3	L 5.8; dia .7	thick, tapered; corroded
2291	C.5:91	3	L 11.7; dia 1.0	frag.; thick, corroded

Figure 12.9 Bronze Double-ended Rods.

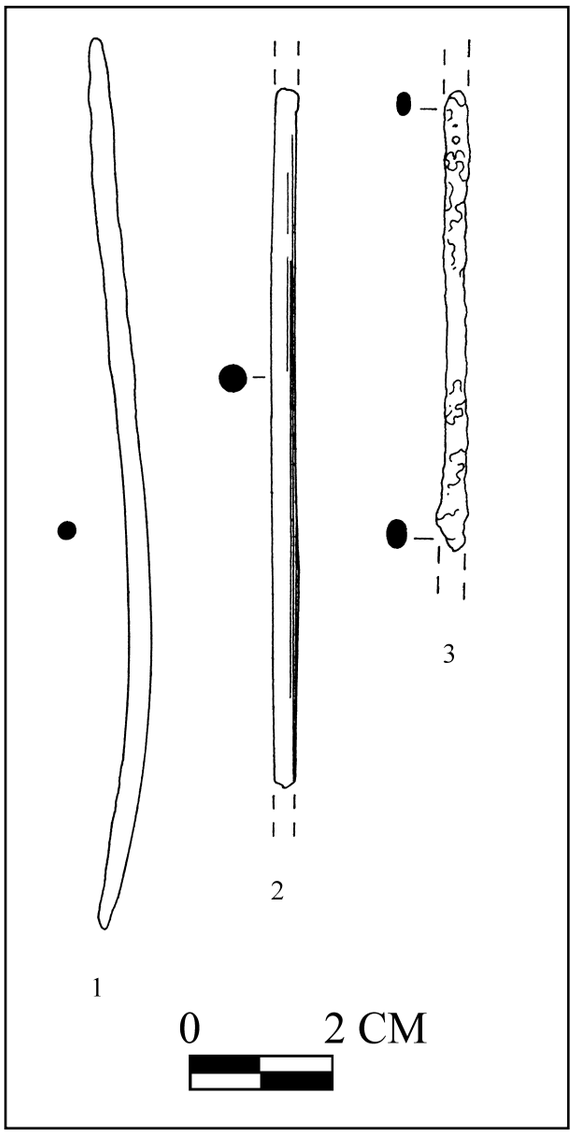
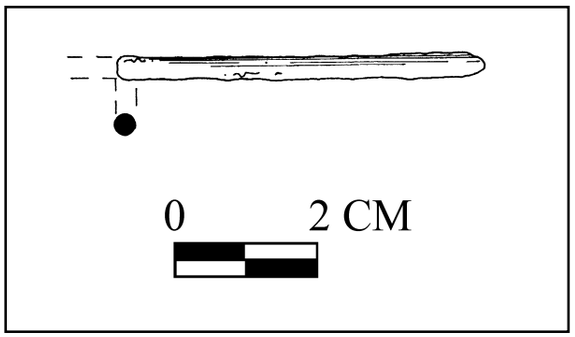


Figure 12.10 Single-ended Rod (Object 2655).



Hollow Rods

Four bronze rod fragments are hollow (Table 12.9). These fragments include Objects 280, 755, 762 and 2036 (fig. 12.12:1-4).

Miscellaneous Rods

Bronze rods 156, 1325, 1339, 1492, 2207, 2303 (fig. 12.13:1-6), 370 and 2043 have unusual features (Table 12.10).

Containers

Several types of cosmetic containers (Table 12.11) were found at Hesban.

Palette

Object 143 (fig. 12.14) is probably the remains of a cosmetic palette. It is a fragment of a rectangular piece of soft stone with an incised design, perhaps of stylized wings lifting a circular object that forms the carved-out bowl of the palette. Its color is a mottled beige. The extant piece measures

Table 12.9 Bronze Hollow Cosmetic Rods.

Object No.	Locus	Stratum	Dimensions	Remarks
280	C.4:7	3	L 2.5; dia .5	DAJ; frag.; hollow “head” area; tapered tip
755	F.4:6	—	L 2.0; dia .45	frag.
762	F.4:7	—	L 3.56; dia .45	frag.
2036	G.6:30	—	L 4.2; dia .3	cf. 280

Figure 12.11 Iron Rods.

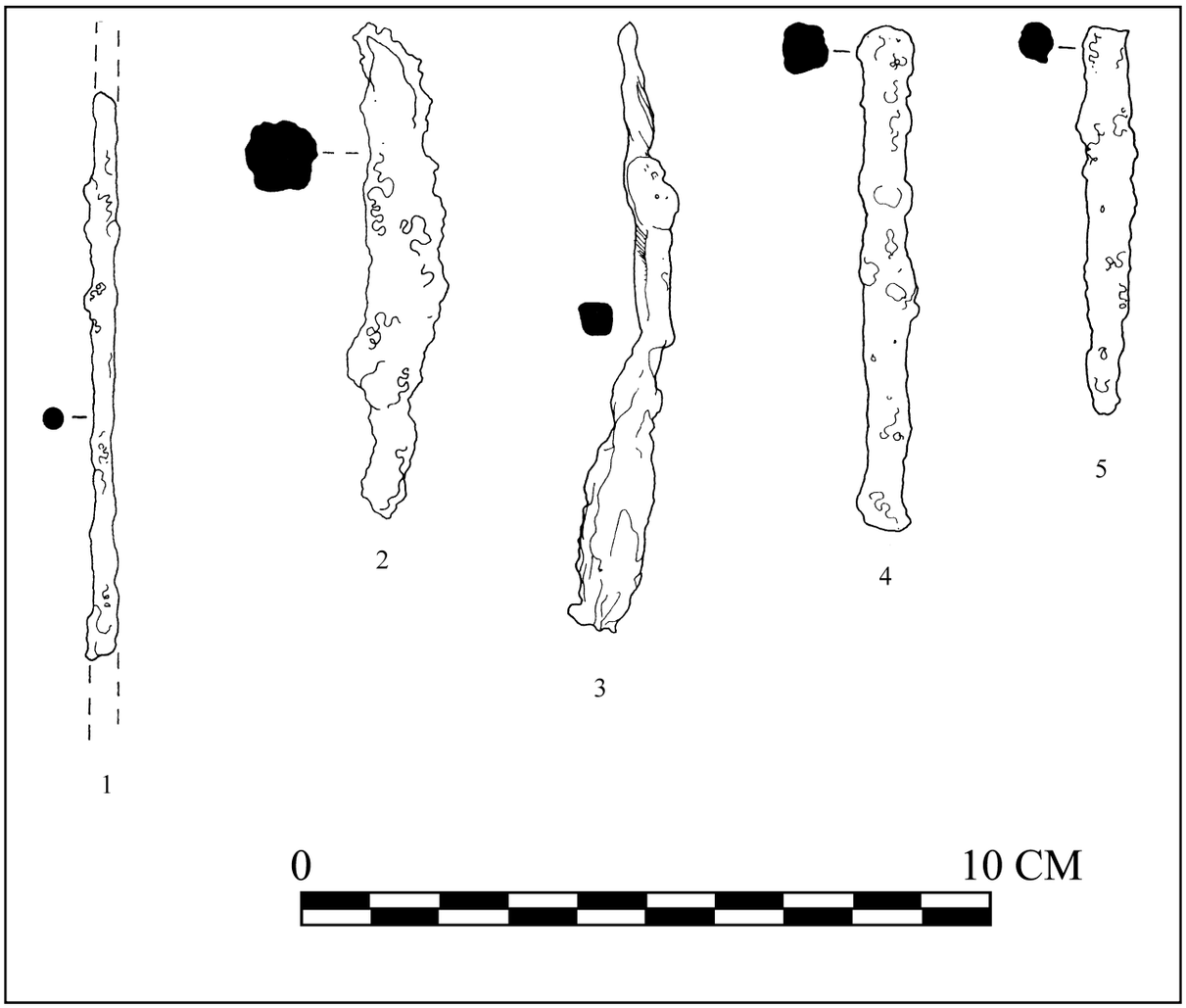


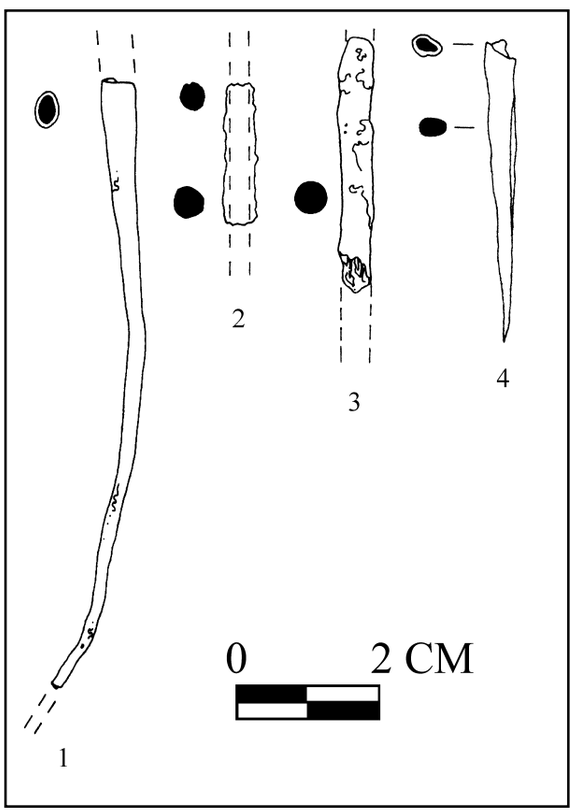
Table 12.10 Bronze Miscellaneous Cosmetic Rods.

Object No.	Locus	Stratum	Dimensions	Remarks
156	C.2:9	?	L ca. 11; dia .34	frag.; ends broken; bend in center
370	C.4:30	3	L 4.5; W. .31	small frag.; rectangular cross-section
1325	G.2:2	—	L 12.2; dia .3	bent; two blunt ends; twists in center
1339	G.2:2	—	L 8.4; dia .6	lobe or head possibly indicated, but heavily corroded; blunt opposite end rather clean; stave not corroded
1492	C.1:89	14 ?	L 3.9; dia .4	small curved frag.; tapered
2043	A.9:76	5	L 6.5; dia .4	bent tip; tapered
2207	C.5:84	cleanup	L 10.2; dia .4	blunt end = head?
2303	C.9:5	2	L 6.0; dia .3	bent; tapered blunt end

Table 12.11 Cosmetic Containers.

Object No.	Locus	Stratum	Material	Type	Dimensions	Remarks
143	B.1:14A	13	stone	cosmetic palette?	W 4.81 cm; th 1.03 cm	stylized incised wing? design in the bowl area
669	F.6:5	—	alabaster & shell	dish	dia 10.2 cm; W of lid 9.75 cm	cosmetic palette-like dish with shell lid; DAJ
671	F.6:3	—	ivory	swan head	H 5.37 cm	swan-shaped container, DAJ
675a	F.6:3	—	cowrie shell	body	W 7.16 cm	swan-shaped container, DAJ
675b	F.6:3	—	ivory	lid ?	7.05 x 4.02 cm	swan-shaped container, DAJ
676a	F.6:3	—	ivory	lid attachment	3.01 x 2.83 cm	swan-shaped container, DAJ
676b	F.6:3	—	ivory	lid attachment	2.39 x 1.29 cm	swan-shaped container, DAJ
677	F.6:3	—	ivory	tail	L 3.46; th 0.8 cm	swan-shaped container, DAJ
705	F.6:12	—	bronze	mirror	dia 7.0 cm	no decoration
1444	B.3:67	15	basalt	mortar	dia 9.27; H 7.42 cm	DAJ
1764	A.9:19	2	glass; silver & bronze	mirror	dia 6.07 cm	DAJ
2800	K.2:3	—	bronze	kohl tube	L 11.55; dia of rim 2.69 cm	stylized form of a woman; DAJ

Figure 12.12 Bronze Hollow Rods.



4.81 cm across. One side is 3.14 cm long; the other is 2.2 cm. It is 1.03 cm thick.

Dish

Object 669 (fig. 12.15) is an alabaster cosmetic dish with its shell lid. This dish is beautifully made and smoothly polished like Egyptian stonework. The outer diameter of its base is 6.07 cm; the inner diameter is 5.65 cm, while the diameter at its rim is 10.2 cm. Four projections are set approximately equidistant (ca. 4.75 cm) from one another. Three are semicircular with a diameter of 2.62 cm, and a ridge carved across each. The fourth looks something like the lip of a spout, but the dish rim is not cut down to make it usable. Hence it seems to be only a vestigial spout. It is concave with a ridge forming a "V" underneath it.

The shell lid (fig. 12.16) fits appropriately. One side of the shell may have been broken off, either to make it the right size or was chipped later. The peak of the shell fits over the vestigial projection. The width across the shell is 9.75 cm.

A striking characteristic is the way that the color shades of the shell and the alabaster make it fit together. The back of the shell is 10YR8/2, "(very pale) orange." The alabaster is basically the same

Figure 12.13 Bronze Miscellaneous Rods.

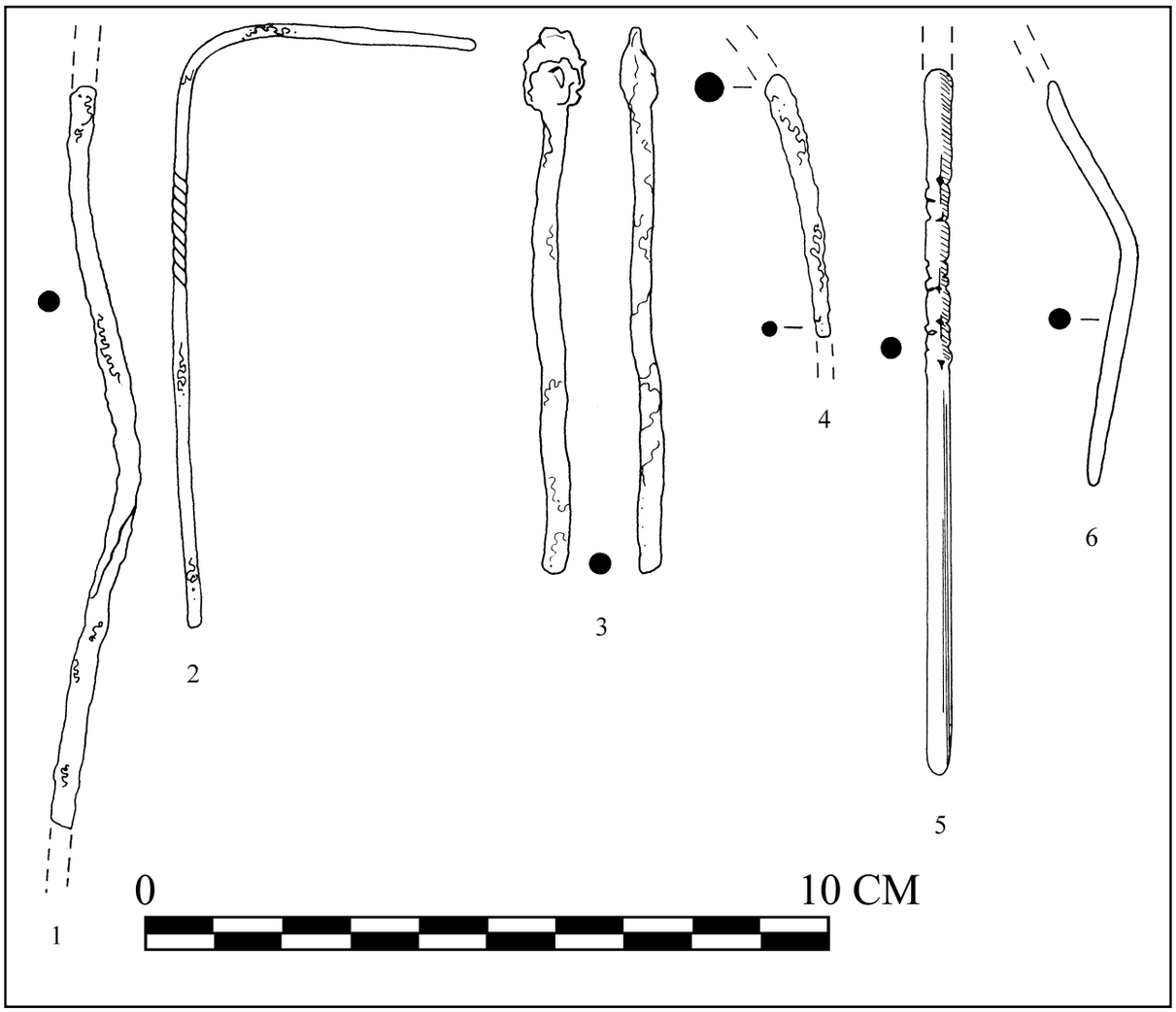
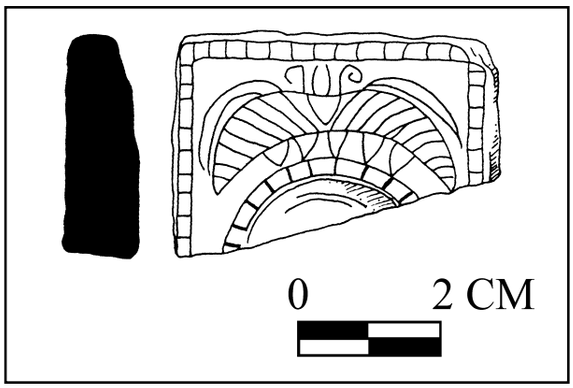


Figure 12.14 Cosmetic Palette (Object 143).



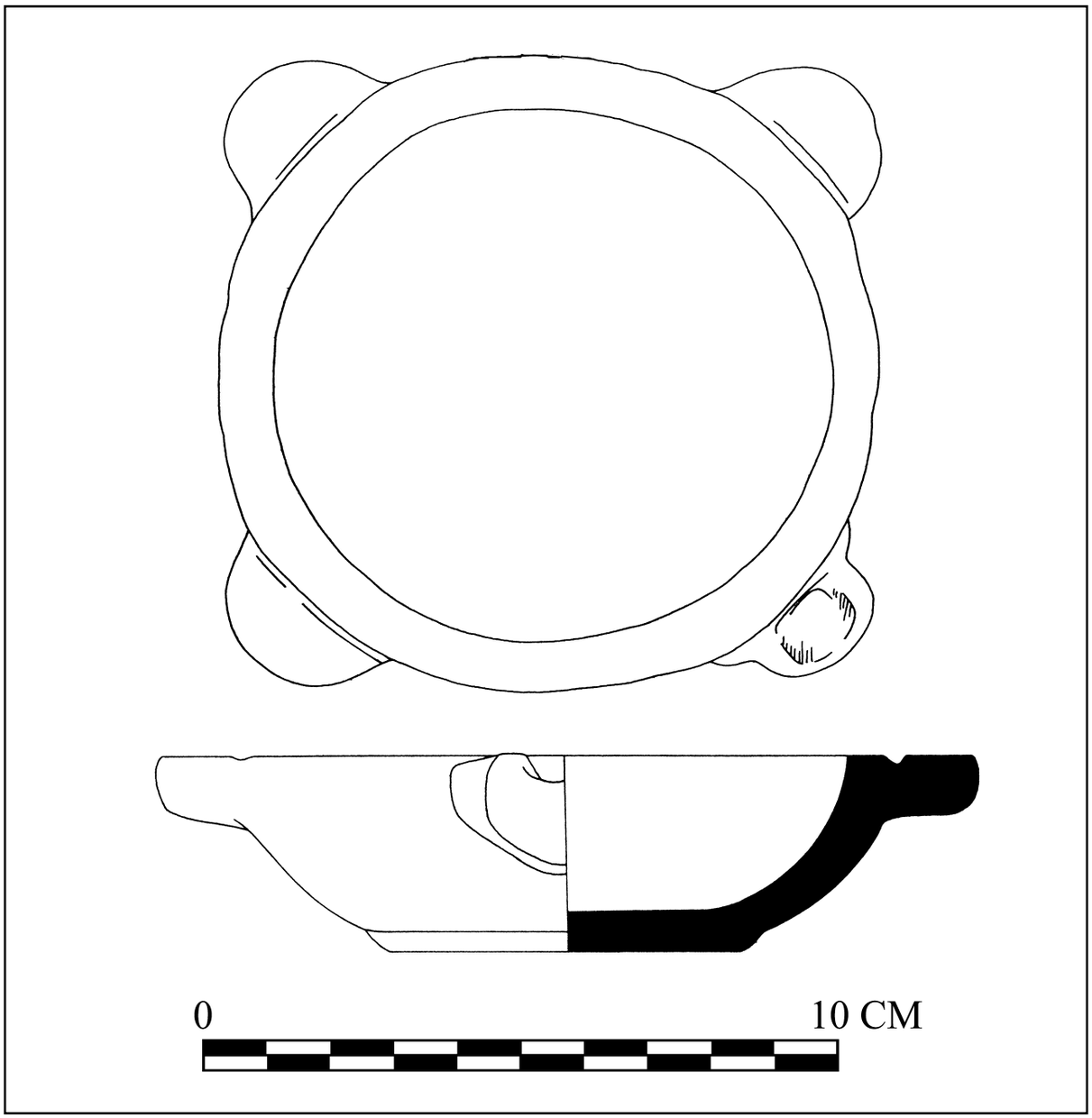
(10YR8/2), but is mottled in places with 10YR6/6 "(dark) yellowish-orange" and 10YR5/4 "moderate yellowish-brown." The tones on the underside of the lid have the shades of 10YR8/2 and 10YR5/4.

This container was probably used as a palette for grinding and mixing cosmetics and is a rather elegant object.

Swan in Shell and Ivory

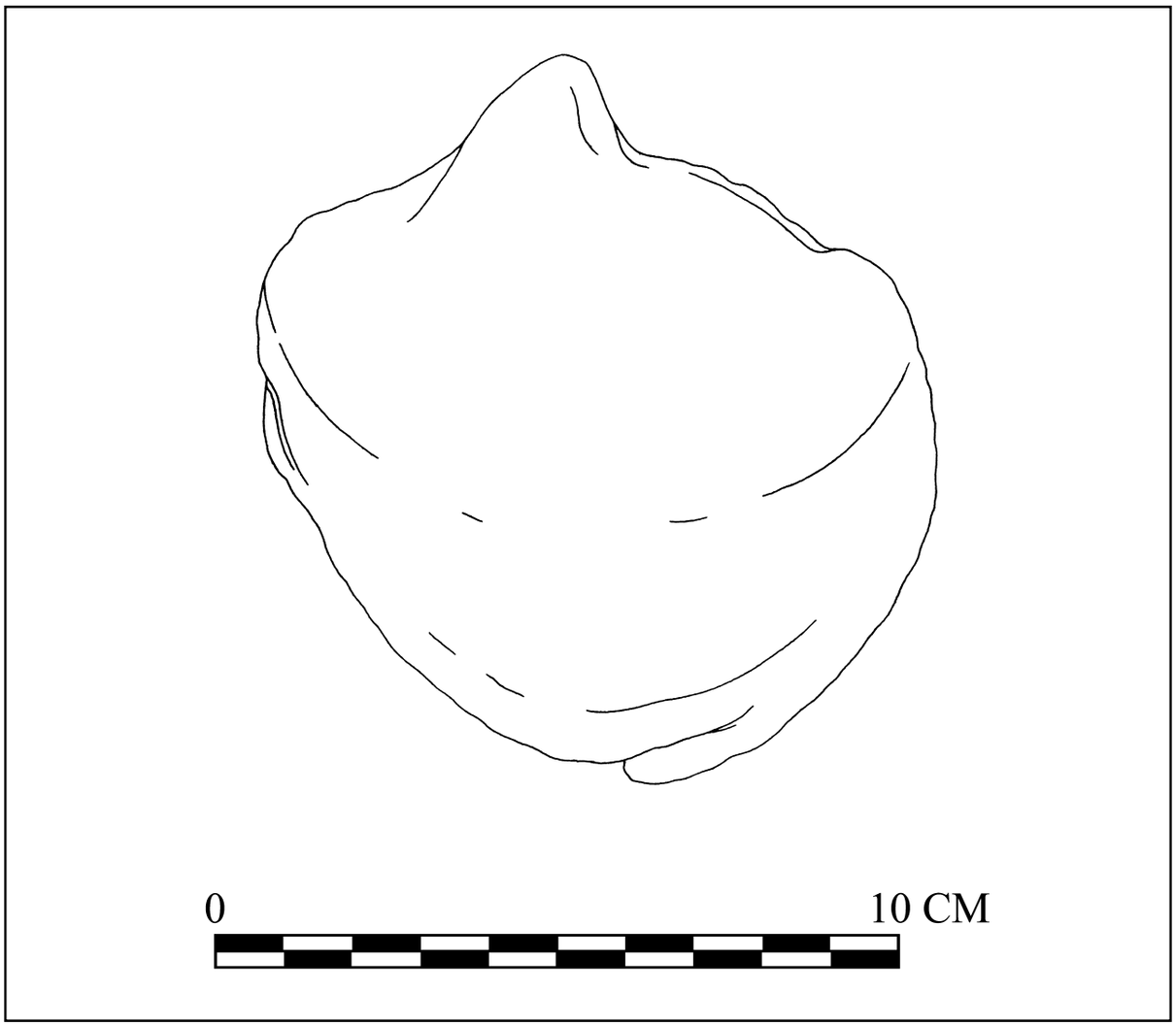
One of the most outstanding objects from Hesban is a shell and ivory swan-shaped container found in Tomb F.6:3 and now located at the

Figure 12.15 Cosmetic Dish (Object 669).



Department of Antiquities. It dates to the Byzantine period. There is some discussion as to how the six pieces originally fit together. The issue concerns the shell and whether its open side was in an up or down position. If the former, the object was probably a container. If this was the case, a platform would have been needed to hold the shell bowl upright, in that it is not possible to rest the shell on its curved back. On the other hand, if the shell's open side was in a downward position, it could not have been used as a container, in which case one wonders whether it was purely decorative, and if so, what its original function might have been.

Figure 12.16 Cosmetic Dish Lid (Object 669).



Object 675a (fig. 12.17:2) is a porcelain-like cowrie shell, the underside of which has been removed to leave a finely-cut ledge as a border around the two halves. The shell measures 7.16 cm across the widest part of its underside and is 3.64 cm deep. The natural colors of the outer shell are three mottled shades of brown: 5YR5/6 "(light) brown," 5YR4/4 "moderate brown," and 5YR3/4 "(darker) moderate brown." The outside is shiny, as is the white color inside. The ledge border is about 0.4 cm wide and has striations around it, making spaces about 0.34 cm wide. The two ends of the shell that mark its widest points are natural formations where the head and tail pieces attach.

Object 675b (fig. 12.17:3) is a flat piece of ivory carved at its outer edge to match the ledge-rim of the shell. It is pear-shaped, measuring 7.05 x 4.02 cm and is 0.34 cm thick. There are lines carved around the edge of the piece, perhaps more to make the ivory less slippery on the shell rim rather than as a decoration. There are three perforations in the center of the piece, consisting of two rectangles on either side of a circle. The rectangular perforations are each 1.27 cm long and 0.59 cm wide. The cir-

cular one is 0.51 cm in diameter. The color of the object is between 10YR8/2 "(very pale) orange" and 10YR8/6 "(pale) yellowish-orange."

Objects 676a and 676b (fig. 12.17:4) are both ivory. Object 676a appears to be complete; but Object 676b is broken. Each has a tab that fits into the rectangular perforations of Object 675b. Object 676a measures 3.01 x 2.83 cm and is 0.43 cm thick. Object 676b is 2.39 x 1.29 and 0.42 cm thick. The color of Object 676a is 10YR8/2. Object 676b is 10YR7/4 "grayish-orange." The carved shapes have the suggestion of wings or cygnets on the back. Both are appropriate if the shell was a container with an ivory lid. If the shell were turned in the other direction (see above), they might be seen as the flexed legs and feet of the swan.

Object 677 (fig. 12.17:5), appears to have been the tail. It measures 3.46 cm lengthwise, 3.0 cm across, and 0.8 cm thick. The color is between 10YR8/2 and 8/6. One side has carvings which divide it into seven strips with feathers, indicated by smaller diagonal lines. Under the middle strip is a carved-out cylindrical tube 0.46 cm in diameter. Inserted into it is a slender stave, the head of which appears to form one of the feathers of the tail. This stave, which is now partially broken, could have had two possible functions. It might have extended across the rim of the shell to the swan's neck in order to hold the head in place. On the other hand, it could have been utilized as an applicator for the cosmetic itself. Used in the former way, it would have bisected the bowl, making cosmetic use awkward. Thus, the latter (or swan miniature position) is more likely.

The base of the tail is narrowed for insertion into the natural groove of the shell. The under surface of the tail has six carved lines making seven crosswise bands. The fourth space is larger than the others. An angular, notched end completes the impression of feathers.

Object 671 (fig. 12.17:1) represents the head of the swan. The neck has a deep "S"-shaped curve, with the end of the bill resting on it. A small curl is present on top of the head. The eyes are marked by a ring-and-dot carving and a ridge encircles the area above the bill. The bill is open, with a ball carved in its tip, perhaps representing a piece of food. The head piece measures 5.37 cm from the base of neck to the top of the curve (height); 2.93 cm across the top of head to the back of the curve (width); and 0.51 cm thick. The color is 10YR8/2 and 8/6.

In terms of the above-mentioned possible positions, the head and tail appear to fit in place in either direction whether or not the shell functioned as a bowl. If Objects 676a and 676b were feet, the object could have stood more gracefully and quite realistically. The shell would then have been in its natural position when it had its own sea animal in it. Yet in this position the ivory "lid" would have been hidden, and the shell could not have been used as a container. Without the ivory fittings, it could have sat comfortably on a flat surface, but the tail would have been dragging on the ground. The feet add realism to the bird representation and lift the tail to a higher position.

A question arises as to the use of the central hole on the large ivory piece. It could have been used as a knob or appurtenance to lift the lid of the bowl; or alternatively, as an object to steady the feet.

Parallels

Parallels include a swan (or duck[1]) head on a spoon handle (Wallert 1967: Table 9, Paris Louvre N 1731 b; Table 10, Paris Louvre E 3671); a bowl of a spoon made of cowry shell formerly riveted to an iron handle (Petrie 1927:37; pl. 33:13), and a duck cosmetic box (Petrie 1927: 37; pl. 27). Another parallel is a bronze figure of a nesting bird (Banck 1967: 336) that dates from the 4th-5th centuries A.D. It has a relatively long tail about as long as its body. The neck is short. In its beak is a round object and on its back is a baby. The eyes are represented by "punched concentric circles." Feathers are indicated by engravings.

Kohl Tube

Object 2800 (fig. 12.18) is a bronze kohl tube. The most distinctive feature is the presence of two protrusions indicating breasts, thus giving the stylized representation of a woman. The rim of the vase is circular with a diameter of 2.69 cm. There are 11 straight lines engraved on its flat-top surface which radiate outward making roughly pie-shaped pieces. The object can be made to stand upside down on its rim, something that is impossible to do on its tapered base, which is only 0.75 cm diameter. The complete length of the object is 11.55 cm.

Below the rim, of what would have been the neck area, are engraved dots or stipples. The top of the ring-lugs appear to mark a line across the object

Figure 12.17 Swan-shaped Cosmetic Container.

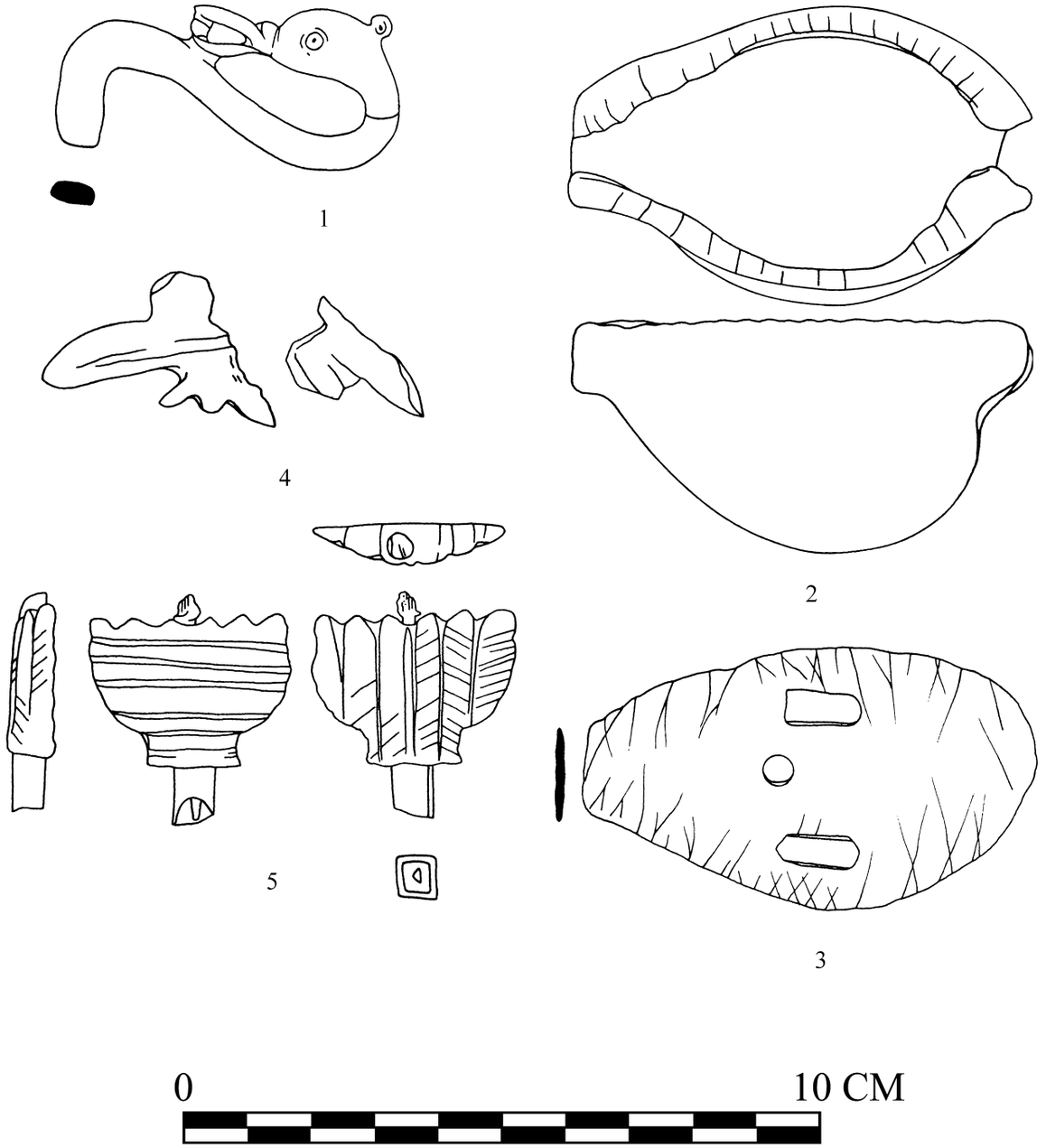
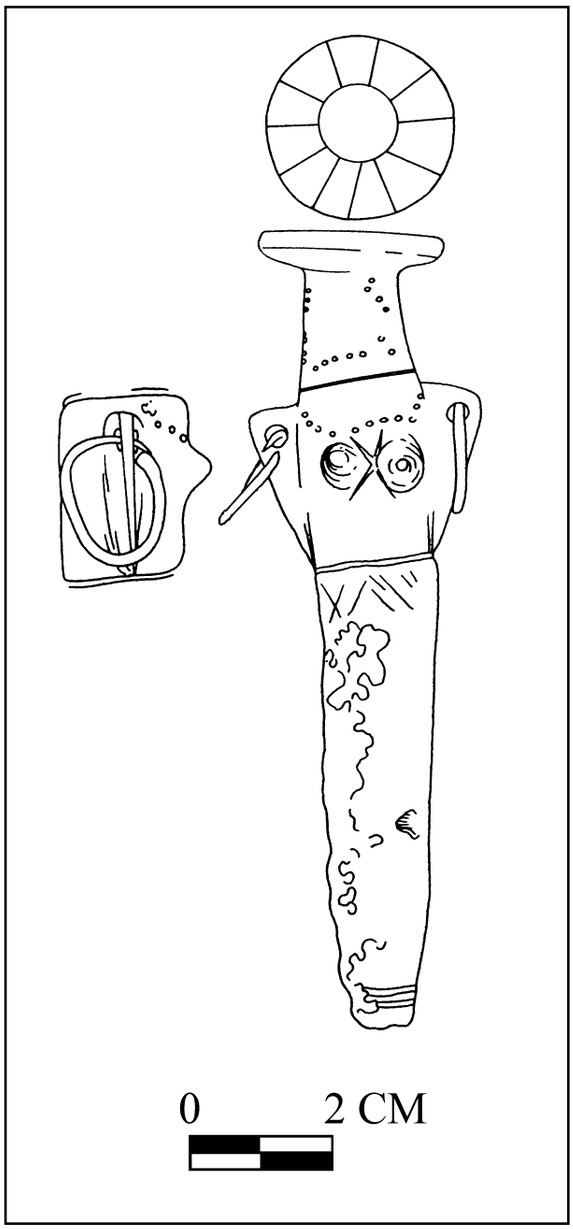


Figure 12.18 Kohl Tube (Object 2800).



which begins the central section. The resulting ridge might indicate the neckline of a garment. A row of stipples falls in a semi-circular fashion from each side of the "neckline." These stipples may represent a bead necklace.

The ring-lugs are not precisely even in height, and the ridge between them slants. Each lug protrudes from the body about 0.77 cm, making a triangular wing ending at an engraved line that marks the waist. The lugs have perforations, *ca*. 0.3 cm in diameter, quite symmetrical and round in shape. From these, wire rings about 1.6 cm in diameter, are suspended. The wire (0.19 cm thick), is graduated toward a point at one end, exactly like earrings. The lugs could be stylized arms, and the rings, when turned upward, would look like large penannular earrings in the neck area. In the upturned position, the object could have been suspended by these rings.

An "X" is engraved between the breasts, possibly indicating a classic pectoral crosspiece. Light cross-hatching just below the waistline may depict fabric gathering in the skirt. The engraved line marking the waist does not overlap. Its ends are separated by 0.5 cm, and a line between them is probably an attempt to even out the ridge.

The opening in the top for the kohl stick is 0.84 cm in diameter. The color is closest to 10YR4/2 "(dark) yellowish-brown."

The Targum Sheni to the Book of Esther includes legends and imaginative additions that go beyond the Old Testament account. In it there are three riddles that Esther asks of Solomon, who is associated now with Ahasuerus. Silberman (1974: 72) commenting on the riddle of the kohl tube remarks that kohl is:

> stibnite or antimony trisulphite, a hard substance ground into a fine powder and kept in a reed or other receptacle. To remove it, a small rod of wood, ivory, or as in the riddle, metal, is first moistened with water and then dipped into the powder. The paste thus formed on the rod is drawn around the eyes to make them appear larger; the outer corner is extended and the eyebrows are also shaped and lengthened.

Kohl was probably used to reduce the glare of the sun, much as modern athletes use today. It may also have had medicinal value in treating the eye diseases of the Middle East.

Mortar

Object 1444 (fig. 12.19) is a mortar for grinding cosmetic preparations. Made out of basalt, it has a smooth, concave surface set on four rounded legs. The diameter is 9.27 cm and its height is 7.42 cm. Its color is 10YR6/2, "(pale) yellowish-brown."

Figure 12.19 Mortar (Object 1444).

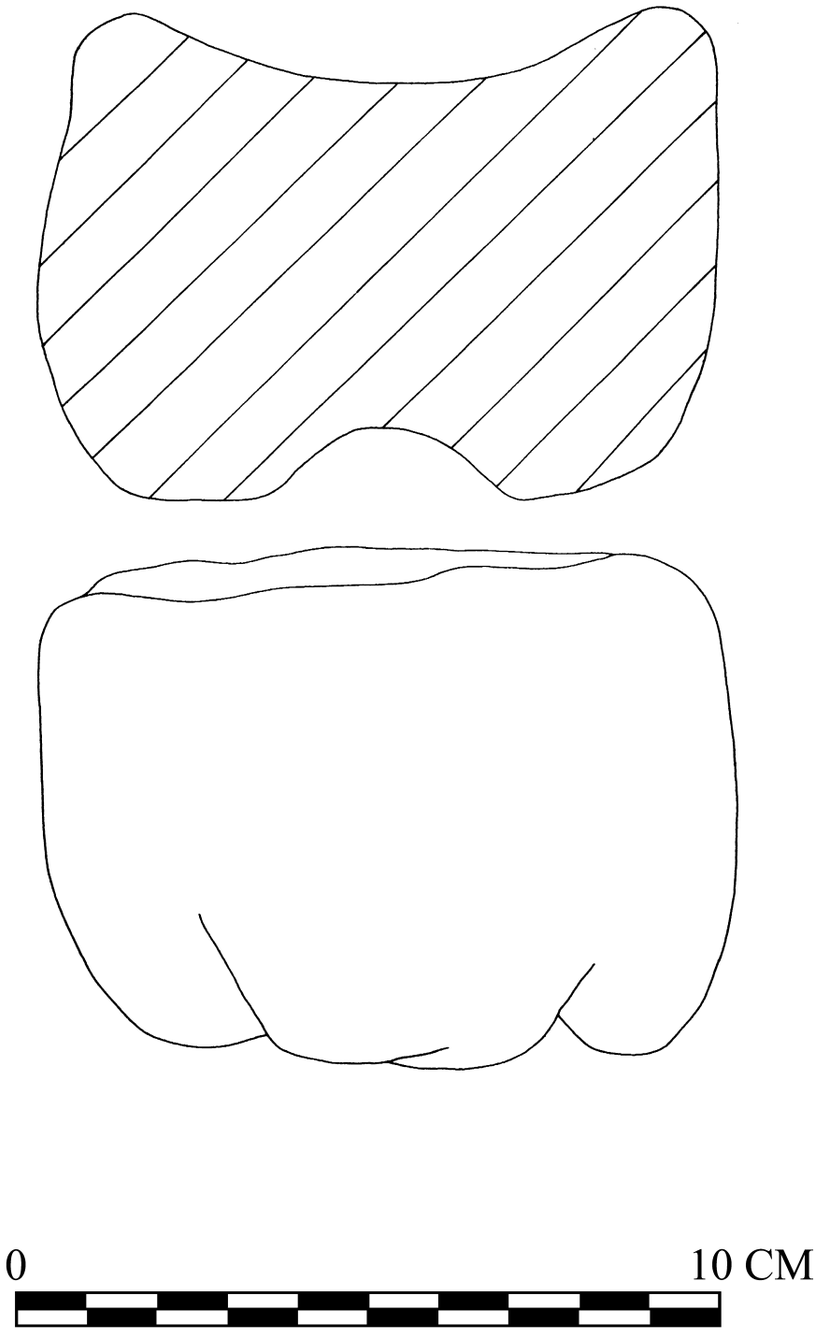
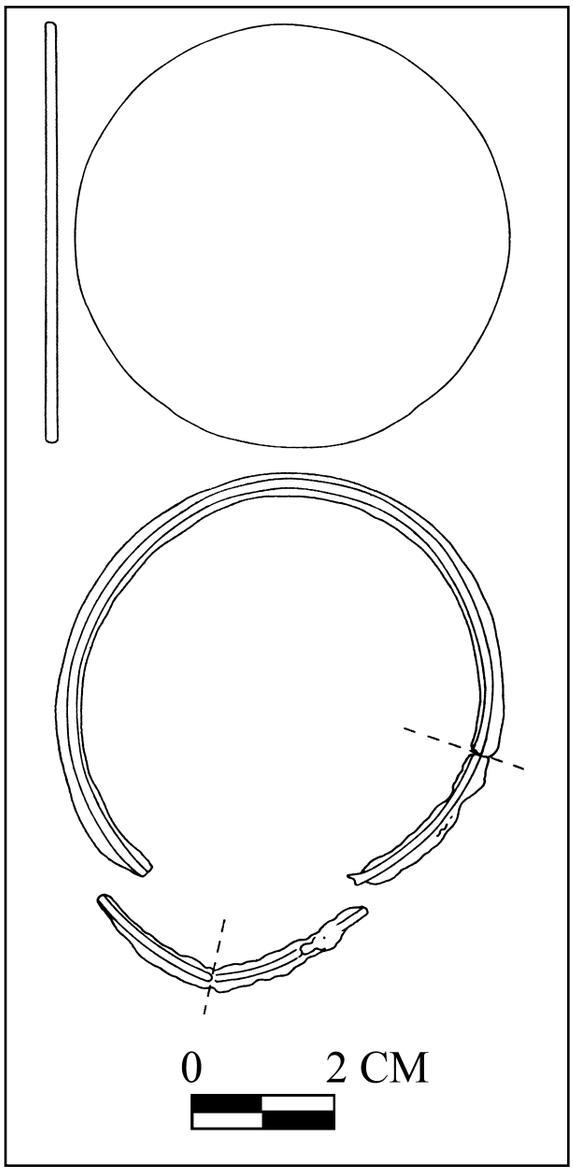


Figure 12.20 Mirror (Object 1764).



Mirrors

Object 1764 (fig. 12.20) is a hand mirror. Although the silver backing is corroded and flaking off, the glass is intact. It is symmetrically round and fits into an accompanying bronze frame. The color of the frame is 5Y6/8 "(light) olive grey." Object 705 is a corroded bronze mirror, which was found in Tomb F.6:12. It is a plain, circular disc with no visible decoration.

Rahmani (1967) describes similar mirrors from the Hellenistic and Roman periods found in Jason's Tomb in Jerusalem. This tomb was used during the first century B.C. After its destruction by an earthquake in 31 B.C., it was used only for secondary burial. First-century B.C. parallels to this type of bronze mirror also occur at Dura-Europas, Djerabis and other Jewish tombs in Jerusalem (Rahmani 1967: 91, nn. 87; 97).

Note

[1]Editor's Note: Two ivory cosmetic boxes with duck heads have recently been found at Ekron (Ben-Shlomo and Dothan 2006: 18-20, fig. 12) that date to Iron Age I.

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Chapter Thirteen

THE JEWELRY FROM TELL HESBAN AND VICINITY

Elizabeth E. Platt

Chapter Thirteen

The Jewelry From Tell Hesban and Vicinity

Introduction

Objects of adornment or jewelry represent a category of artifact often associated with people of importance as symbols of status. Due to the frequently disturbed nature of the tell deposits and at times even the tomb remains at Hesban, the issue of the status of the owners of jewelry is not always readily apparent. Nevertheless, a relatively large variety of jewelry was found at the site, including such types as beads, bangles, rings, earrings, necklaces, chains, pendants, hairpins, and brooches.

Beads

The most numerous type of jewelry, indeed among the small finds from Hesban as a whole, are beads (Table 13.1), of which there are 368 entries. The beads were primarily made from two types of material: glass and stone. The glass specimens outnumber semiprecious stones more than three to one. The bead typology below follows Beck's (1928) classification. Two measurements are used: length and diameter. As Beck defines them, the length of a bead is the measurement across the length of the perforation and the diameter is the width of the transverse section at right angles to the perforation.

Glass

There are 250 Hesban beads made of glass, the majority from the Roman, Byzantine and Islamic periods. Most of the Roman-period beads were found in tombs (especially Tombs F.6 and F18). The majority were of the wound variety, although some, such as Object 1558 (fig. 13.1:1) were cut-from-canes. Object 2073 was made in a crimped mold. The colors of many of these beads are difficult to discern because of weathering. Many beads are now grey and iridescent, but it appears that they were at one time translucent blues and greens, along with some yellow-browns, opaque and translucents. Object 1209 (fig. 13.1:2) consists of three bird-shaped beads. The head of one appears to be a separate globule of glass affixed to the body while warm (reheated and reworked), with perforation through the eye area. Beck (1928) classifies this type as Group XXXIII, "beads and pendants representing birds . . ., B.2 dove and pigeon." Two carnelian pendants from the Early Hellenistic Period at Amphipolis? (Yalouris, Andronikos, and Rhomiopoulou 1980: 146-47, no. 86) are parallel. They have heads which are turned back and eyes marked by a hole. However, the suspension apparatus is on the bird's back. Object 1461 (fig. 13.1:3) is a stratified flush-eye bead with a light-blue background and eyes of dusky blue which sit on top of each other in four pairs. Parallels include a glass bead from Italy dated to ca. 700 B.C. (Beck 1928: 43).

Of the glass beads from Byzantine-period strata at Hesban, many were also found in tomb loci, particularly from Tombs F.1, F.6, F.37 and F.38. The manufacturing technique, like the Roman-period beads, was mostly of the wound variety. Objects 1175a-jj (= 36 beads) are preponderantly yellow-orange and browns. Others are translucent or decorated with trails. Two pendants (Objects 1480; cf. fig. 13.1:4 and 1481; cf. fig. 13.1:5) from Tomb F.16 appear to be stylized fruits (pomegranates?). Beck (1928: 29; fig. 24) shows one parallel. Others are found at Tell en-Naṣbeh (Harrison 1947: 267; fig. 72; pl. 107:1) and Karm al-Shaikh, Jerusalem (Baramki 1932; pl. vi:19). Object 1482 (fig. 13.1:6) is a drop pendant with a ring for suspension, made of multiple-wound black and gold glass cane, as is Object 1483 (fig. 13.1:7). Another interesting bead is Object 1484 (fig. 13.1:8) which consists of three multiple-wound spiral beads, two of which are weathered iridescent blue-green and the third made of gold metallic glass.

As in the Roman and Byzantine periods, the primary manufacturing technique of the Middle and

Table 13.1 Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
28	A.2:5	3	faience	2.5Y8/4	I.B.1.c	III	0.8 x 0.85	decomposed, glaze flaking off
29	C.1:1	2	glass	7.5YR N/8-6	X.D.2.d	III	1.4 x 0.55	greyish-white on one side, dark blue silver; irregular splotches
31	C.2:1	2	stone	—	—	—	—	bead pendant; w. 2.25 x h. 1.7
33	C.1:4	3	glass	2.5YN7	X.D.2.d	III	0.9 x 0.6	slightly mottled
34	C.1:4	3	glass	5GY7/1	I.C.2.b	—	4.5x 5.5	cut diagonally from rod
37	A.4:1	1	glass	5G5/2	I.C.2.e	—	0.85 x 0.83	bright blue band around indentation
56	C.1:4	3	glass	10G4/2	I.B.1.a	II	0.35 x 0.65	—
57	C.1:4	3	glass	5G4/2	I.B.1.a	VIa	0.3 x 0.5	a lobe of glass on inner perforated edge
58	C.1:5	3	glass	5Y7/8	I.B.1.b	—	0.4 x 0.75	—
59	C.1:5	3	glass	5Y7/6	I.B.1.a	—	0.3 x 0.44	opaque
60	C.1:5	3	glass	5G4/2	I.D.2.b	—	0.8 x 0.3	translucent; pinhole perforation; cut from cane
68	A.4:1	3	glass	5R4/8	I.C.2.b	—	0.3 x 0.41	white core; from cane rod?
69	C.1:1	2	faience + glass	2.5Y8/6	I.B.1.a XLVI A.2.a	—	1.3 x 1.8	raised spot eye bead; black with gray striations and 3 gray-yellow dots
70	C.1:5	3	faience	5GY6/1	L.A.2	—	2.44 x 1.08	gray stone, slightly damaged
98	C.1:5	3	glass	N/7+6	I.B.1.a	IVb	0.55 x 8.4	gray mottled
99	C.1:4	3	faience	7.5YR N/7	X.D.2.d	III	1.35 x 0.7	silvery gray
100	A.3:8	3	glass	5G5/1	I.B.1.a	VIb	0.43 x 0.6	decomposed; probably originally translucent green; has 2 lobes (1 on hole edge, 1 on outer edge)
176	C.1:5	3	coral	2YR6/8	I.D.2.b	—	1.8 x 0.4	silver-colored pin inserted
177	C.3:1	2	faience	10YR7/2	I.B.1.c	III	0.65 x 0.86	glaze is flaking off
178	C.1:6	3	glass	5BG4/6	I.B.1.a	VIa	0.45 x 0.66	translucent
179	C.1:6	3	glass	N6/5	I.B.1.b	III	0.6 x 0.85	mottled
227	C.1:6	3	glass	lapis blue	I.D.2.b	—	0.9 x 0.75	cut from cane; one end cut diagonally
236	A.4:16	9	faience	2.5Y8/2	I.B.1.a	VIa	0.95 x 1.1	"white," mottled yellow
264	D.1:3	2-3	glass	lapis blue	I.C.2.f	—	0.65 x 0.58	a wound bead with a "trail" of white applied by dipping it into a stripe piece; decoration classification: XLVII.A.1.a "zone bead"
265	D.1:3	2-3	coral	10R4/6	—	—	1.53 x 0.64	DAJ; a piece of coral broken off at one end
281	C.3:7	6	faience	—	I.B.2.e	VIa	1.01 x 2.41	DAJ; grayish-cream; mottled; shades of 10YR8/2 and 5Y6/1; double dotted lines made by a tiny instrument pressed into the surface
299	B.1:53	15/16	bone	10YR7/4	I.B.2.bf	VIa	0.62 x 1.7	DAJ; polished shiny, worked on lathe
335b	C.4:47	n.d.	quartz-carnelian	10R5/6; 4/6	I.C.1.a	—	0.9 x 0.9	half darker, banded
336b	C.4:47	n.d.	glass	clear	L.A.2	—	—	ground or chipped over whole or greater part of the surface
338	E.1:1	—	glass	5G6/2	XII B.2.b	—	0.4 x 0.5	decomposed; cut from cane
340	B.2:1	2	serpentine	5GY6/1	—	—	2.9	pendant, irregular shape, W 1.4
349	B.3:1	2	glass	black base	I.B.1.a	III	1.2 x 1.42	"splash decorated"; silver striations at right angle to axis and many places light blue, gray, red and brown spots
357	B.2:5	9	glass	lapis blue	I.C.2.e	—	0.55 x 0.55	—

Table 13.1, *continued.* Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
364	C.1:24	n.d.	glass	black	I.B.1.b	—	0.75 x 1.1	black with white trail; XLII A.1.a
367	D.1:24	6	glass?	N/4 + 10YR8/6	L.A.2	—	1.13 x 1.42	decorated with yellowish blobs flush to surface; I.C.1.a.
379	C.4:30	3	serpentine	5G7/2 + 5/2	—	—	2.2	major fragment of a pendant; W 1.05
382	D.1:40	7	quartz-carnelian	10R6/8, 5/8, 4/8	X.C.2.b	II	0.5 x 1.0	diamond-shaped facets cut at corners; banded
383	D.1:40	7	glass?	black	I.B.1.b	—	0.5 x 0.8	broken off
384	D.1:40	7	glass?	10YR8/4	I.B.1.a	—	0.6 x 0.65	circular; uneven
408	D.6:10	2	faience	N/4 C.1.a	II + IV	VIa	1.05 x 1.47	a squashed turquoise melon; approximately 8 or 9 gadroons; XXIII
428	D.5:4	3	glass	5G6/6	L.A.2	—	0.7 x 0.65	a wound bead that has been faceted
437	B.4:5	2	glass	N/7 iridescent	I.C.1.a	—	0.35 x 0.5	one protrusion of glass at the outer edge of the hole
441	C.1:7	6	glass	black	—	—	0.65	broken; W 0.4
511	D.6:5	2	glass	5BG4/6	I.C.2.b	—	0.58 x 0.54	imitating turquoise
523	C.4:13	6	glass	black	I.D.1.a	—	1.4 x 0.5	flaky
532	C.1:7	6	glass	black	I.D.1.b	—	0.6 x 0.48	—
555	C.5:2	3	glass	5YR6/8	I.B.1.a	—	0.65 x 1.0	gray-black; flaking off
557	C.5:1	2	quartz-carnelian	5YR6/8	L.A.2	—	0.8	uneven; resembles a roughly cut I.B.1.a; evenly colored; W 0.35
569	C.1:32	11	glass	2.5Y8/6	I.C.1.b	—	1.1 x 1.2	translucent pale yellow with gilt pressed on
576	C.4:41	6	glass	5PB3/2	I.B.1.b	—	0.6 x 0.85	cane bead?
590	F.4:4	—	faience	5Y6/3	I.C.1.a	VIb	1.15 x 1.27	decomposing
591	F.4:4	—	faience	5Y6/3	I.B.1.a	VIa	0.8 x 1.05	probably originally a turquoise blue melon head with approximately 13 gadroons
605	D.6:26	3	glass	5G5/2	X.D.2.b	—	1.5 x 0.43	—
614a	F.6:2	—	glass	black	I.C.1.a	—	0.8 x 0.9	flaky iridescent blue underneath; indentation going into one side of the perforation
617	F.6:2	—	quartz-carnelian	2.5YR5/8	I.C.6.bd	—	0.55 x 0.75	convex with one concave end; mottled
619	F.6:2	—	glass	silver & pale yellow	I.C.1.b	—	0.6 x 0.55	molded, gilded silver? glass bead; hollow cane of glass, covered with gilt and more glass on outside and pressed into shape
658	C.4:15	3	quartz-carnelian	5YR5/8	I.B.1.b	—	0.7 x 1.36	highly irregular surface; evenly colored
680	F.6:5	—	glass	black + 7.5YR8/4	I.B.1.a	VIa	0.7 x 0.85	black with yellow
681	F.6:4	—	glass	—	—	—	—	—
686	F.6:3	—	glass	black w. yellow-green spots	—	—	—	—
689	F.6:14	—	agate	—	I.D.1.b	III	0.94 x 0.87	banded; tan, white, translucent stripes
691	F.6:12	—	glass?	6/2	I.B.1.a	—	0.19 x 0.27	5 very small beads
693	F.6:12	—	quartz-carnelian	2.5YR3/6 + 4/8	I.B.1.b	III	0.67 x 0.95	orange with black striations on one side; perforation in a single cone, not in center
694	F.6:12	—	amethyst	5P6/2	I.B.2.f	III	0.43 x 0.85	—

Table 13.1, *continued.* Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
695	F.6:12	—	glass	black	I.B.2.e	—	0.6 x 0.8	black flakes with blue/silver below
696	F.6:12	—	quartz	clear	I.B.1.a	—	0.5 x 0.8	rock crystal, irregular and marred
697	F.6:12	—	quartz-carnelian	5YR5/8	I.B.1.e	—	0.34 x 0.6	mottled, striped
700	F.6:12	—	faience	5BG7/2	I.C.1.a	VIa	0.97 x 1.2	melon with 11 gadroons
701	F.6:12	—	quartz-carnelian	5YR5/8 + 4/8	I.B.1.a	III	0.6 x 0.85	somewhat irregular in shape with marring; mottled, dark stripes
702	F.6:12	—	quartz	clear	I.B.1.a	IV	0.5 x 0.75	red crystal
703	F.6:12	—	glass	black	I.B.1.a	—	0.7 x 0.8	weathered; black with iridescent gold and pink, black porous
704	F.6:13	—	faience	5G7/2	I.B.1.a	VIb	1.05 x 1.4	ridge halfway through the perforation; melon with 24 gadroons
707	F.6:12	—	glass	—	I.C.1.a	—	1.25 x 1.21	"zone"; white band decoration; impressed around diameter; remainder of bead appears to be silver that has a flaky black layer; originally a purple glass that has weathered in layers; the white band is a trail
708	F.6:12	—	quartz-carnelian	10R4/8	I.B.2.e	—	0.57 x 1.0	evenly colored
709	F.6:12	—	quartz-carnelian	10R4/8	I.B.1.c	—	0.65 x 0.95	uneven shape, mottled color
710	F.6:12	—	quartz-carnelian	2.5YR5/8	I.B.2.f	—	0.6 x 0.9	evenly shaped
711	F.6:12	—	quartz-carnelian	2.5YR5/8	I.B.2.f	—	0.5 x 0.8	striped, light & dark orange
712	F.6:12	—	quartz	clear	I.B.1.a	—	0.57 x 0.8	rock crystal, irregular shape; perforation not in center
713	F.6:12	—	glass	black	I.C.2.b	VI m-l	0.6 x 0.55	XXV, mulberry bead; made by being blown into mold; black flakes off; silvery gray (gilded?)
716	F.6:13	—	faience	turquoise	I.C.1.a	VIb	1.02 x 1.27	looks like a melon, but no evidence of gadroons
717	F.6:13	—	glass	2.5Y7/4	I.B.1.c	VIa	0.82 x 0.95	mottled green on a creamy background; speckled in 2.5Y4/2
722	F.6:13	—	quartz	2.5YR4/8	I.D.2.f	—	1.73 x 1.7	slightly mottled
723	F.6:13	—	agate	10YR7/1 + 4/2	I.D.1.b	III	1.36 x 1.04	banded; cream, tan, gray stripes
724	F.6:13	—	glass	5G7/8	I.B.2.e	—	0.55 x 1.0	black; flakes off; translucent green with some silver gilt on one part
757	F.4:6	—	quartz-carnelian	2.5YR5/8	I.B.2.f	III	0.35 x 0.7	slightly mottled
758	F.4:6	—	bronze	green	I.B.2.b	Vb	0.41 x 0.8	shiny bronze underneath patina
784	C.4:53	6	steatite	N/5	I.C.1.b	—	0.7 x 0.7	dark gray with 2 whitish veins
788	C.5:2	3	glass	iridescent 10YR8/2	I.B.1.a	—	0.6 x 0.75	2 lobes on perforation; perimeter has some black flakes
800	D.6:34	3	faience	5GY5/2	I.B.2.b	VIb	0.55 x 1.23	dusty yellow-green finish painted on white, blue dots
802	A.1:58	8	coral?	2.5YR5/8	I.D.1.a	—	0.95 x 0.3	large pock marks make uneven surface, slightly curved
812	C.5:3	3	coral	7.5R6/2	—	—	2.17 x 0.28	no perforation, not a bead

Table 13.1, *continued.* Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
828	C.4:53	6	coral	2.5YR6/8	I.D.1.a	—	0.8 x 0.6	pockmarked
833	C.4:51	6	glass	10YR7/1	IX D.2.b	—	1.3 x 1.08	thick whitish layer flakes off to reveal porous sponge-holed silvery layer; "flush stratified eye"; decorations in tan, one on each surface; folded cane around wire or just a crack?
848	F.1:2	—	glass	5B5/6	I.B.1.a	VIa	0.64 x 0.97	—
852	A.2:28	12	glass	5G4/2	I.B.1.a	VIa	0.4 x 0.72	—
853	A.2:28	12	glass	N/8	I.B.2.b	—	0.36 x 0.46	—
859	C.1:6	3	glass	7.5YR8/2	I.B.1.a	VIb	0.35 x 0.6	whitish iridescent decomposing glass
860	C.4:53	6	glass + metal	—	—	—	—	53 beads + 1 metal fragment
864	A.5:34	14	smoky quartz	N/5 XIV	D.2.f	—	2.14 x 1.1	octagonal shape; translucent light color with light flecks, rutile inclusions
867	C.5:3	3	glass	5GY6/1	I.B.1.a	—	0.65 x 0.9	slightly translucent
904	D.5:5F	3	quartz-carnelian	7.5YR5/8	I.B.1.e	—	0.57 x 1.0	mottled lighter + darker translucent
908	D.5:15	7	quartz	clear	I.B.1.a	—	0.52 x 0.81	translucent rock crystal
922	D.6:33B	3	faience	5B5/6	I.B.4.fb	VIb extra large	1.35 x 1.9	—
923	D.6:33B	3	faience?	5B7/6	I.B.1.a	—	0.45 x 0.55	one profile pear-shaped with convex and concave curve
924	D.6:33B	3	glass?	black	I.B.1.a	—	0.28 x 0.45	very carbonized
961	F.8:8	—	glass	5PB3/2	I.B.2.b	VIa + III	0.55 x 0.63	one end is cut on a diagonal
962	F.8:8	—	faience	5BG7/2	I.B.1.a	VIa	1.02 x 1.22	—
966	B.4:41	2-13	glass	—	—	—	1.1	—
975a	B.1:balk trim	n.d.	glass	7.5YR4/2	I.C.2.b	Vb	1.05 x 1.3	multiple-wound head, irregular surface
975b	B.1:balk trim	n.d.	glass	N/B	I.D.2.b	VIa	0.73 x 0.46	decomposing glass covered with cream-gray layer, irregular surface
987	D.6:33E	3	glass	N6/2, 5/2	I.B.1.a	VIa	0.65 x 0.75	mottled
988	D.6:33E	3	faience?	5B7/6	XIII D.2.b	III	1.15 x 0.65	pentagonal shape
994	D.6:33E	3	glass	5Y6/4	I.B.1.a	VIa	0.35 x 0.6	—
1003	F.10:8	—	glass	5Y7/6	X.C.2.b	—	0.45 x 0.46	gold metallic look; decomposing
1047	B.4:47	13	glass	black	I.D.1.a	—	0.9 x 0.4	black flakes off in layers
1125	B.4:50	13	faience	5B7/6	I.B.1.a	VIa	1.13 x 1.35	melon with 14 gadroons
1144	D.6:33I	4	quartz-carnelian	5YR6/6, 5/6	I.D.1.f	—	0.83 x 0.65	mottled
1146	D.6:33F	3	faience	5BG7/2	I.B.1.a	VIa	0.68 x 1.23	somewhat irregular
1162a	F.1:2B	—	glass	5PB3/2	I.B.1.a	VIa	0.42 x 0.51	translucent
1162b	F.1:2B	—	hematite?	2.5YR8/4	—	—	0.61	irregular surface; no perforation
1167a	F.1:2B	—	glass	black	I.B.1.a	—	0.5 x 0.75	decomposing glass
1167b	F.1:2B	—	faience	2.5Y8/4	I.B.1.a	VIa	0.95 x 1.14	melon with 11 gadroons, decomposing
1172a	F.10:6	—	glass	grayish	I.B.1.a	—	0.31 x 0.46	decayed; some reddish soil adherents
1172b	F.10:6	—	glass	grayish	I.B.1.a	—	0.42 x 0.51	decayed; some reddish soil adherents
1172c	F.10:6	—	glass	grayish	I.B.1.a	—	0.78 x 0.44	decayed; some reddish soil adherents
1172d	F.10:6	—	glass	grayish	I.B.1.a	—	—	decayed; some reddish soil adherents
1172e	F.10:6	—	glass	grayish	I.B.1.a	—	0.39 x 0.43	decayed; some reddish soil adherents
1172f	F.10:6	—	glass	5Y7/6	I.C.1.a	—	0.61 x 0.56	translucent white trail in center with small fine black band

Table 13.1, *continued.* Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
1172g	F.10:6	—	glass	5Y7/6	—	—	0.58 x 0.58	DAJ; similar markings to bead 1172f
1175a	F.10:2	—	glass	5BG4/6	I.D.1.a	—	1.14 x 0.41	DAJ; crack which looks like a folded or wrapped construction
1175b	.10:2	—	glass	5YR2/1	I.B.1.a	—	0.75 x 0.92	DAJ; brownish black, some striations across surface, outside of perforation
1175c	F.10:2	—	glass	5YR2/1	I.C.1.e	III	0.88 x 0.89	DAJ
1175d	F.10:2	—	glass	5Y8/1, 10YR7/4	I.C.1.a	—	0.76 x 0.58	DAJ; striped trails of yellowish gray
1175e	F.10:2	—	glass	10YR6/6	I.B.2.b	—	0.48 x 0.95	DAJ; perforation off center
1175f	F.10:2	—	glass	10YR8/6 10YR5/4	I.D.1.a	—	0.85 x 0.65	DAJ; striped trails across perforation
1175g	F.10:2	—	glass	5Y5/6	I.C.2.e	—	0.8 x 1.06	DAJ; translucent
1175h	F.10:2	—	glass	N2	I.D.1.a	—	2.01 x 0.79	DAJ; striations make ribbed cross section; seems to have been made from segmented pieces where one end was broken off from the next segment
1175i	F.10:2	—	glass	10YR8/2 10GY4/4	I.D.1.a	—	0.98 x 0.74	DAJ; very pale orange bead with bright green trail waves
1175j	F.10:2	—	glass	5B5/6	I.B.1.a	—	0.84 x 0.95	DAJ; many white eyes on blue base
1175k	F.10:2	—	glass	10YR8/2 10YR7/4	I.D.1.a	—	0.93 x 0.67	DAJ; trails parallel to perforation
1175l	F.10:2	—	glass	10YR2/2	I.D.1.a	—	0.6 x 0.46	DAJ
1175m	F.10:2	—	glass	5YR2/2	I.B.2.e	III	0.55 x 0.6	DAJ
1175n	F.10:2	—	glass	—	I.D.1.a	—	—	DAJ; tiny wound bead
1175o	F.10:2	—	glass	—	I.D.1.a	—	—	DAJ; tiny wound bead
1175p	F.10:2	—	glass	10YR7/4	I.D.1.a	—	0.79 x 0.59	DAJ; trails?
1175q	F.10:2	—	glass	5Y7/2	I.C.1.a.	—	0.5 x 0.55	DAJ; cream + green stripe, trail perpendicular to the perforation
1175r	F.10:2	—	glass	—	I.D.1.a	—	—	DAJ
1175s	F.10:2	—	glass	5YR2/2	I.D.1.a	III	0.83 x 0.59	DAJ
1175t	F.10:2	—	glass	mottled gray & cream	I.D.1.a	—	0.8 x 0.6	DAJ; decayed
1175u	F.10:2	—	glass	—	—	—	—	DAJ; similar to bead 1175t
1175v	F.10:2	—	glass	—	I.C.1.a	—	0.58 x 0.55	DAJ; appears to have a central trail perpendicular to the perforation
1175w	F.10:2	—	glass	—	—	—	—	DAJ; similar to bead 1175q
1175x	F.10:2	—	glass	pale orange	I.D.1.a	—	0.79 x 0.56	DAJ; creamy trails
1175y	F.10:2	—	glass	—	—	—	—	DAJ; similar to bead 1175x
1175z	F.10:2	—	glass	5YR2/1	I.C.1.a	—	0.54 x 0.67	DAJ; has tips
1175aa	F.10:2	—	glass	—	—	—	—	DAJ; similar to bead 1175k, but trails are perpendicular to the perforation
1175bb	F.10:2	—	glass	—	—	—	—	DAJ; similar to bead 1175k, but wavy trail is cream & brownish
1175cc	F.10:2	—	glass	—	—	—	—	DAJ; similar to bead 1175bb, trail cream & greenish brown
1175dd	F.10:2	—	glass	—	—	—	—	DAJ; similar to bead 1175aa
1175ee	F.10:2	—	glass	—	I.B.1.a	III	0.64 x 0.84	DAJ; mottled dark gray & whitish
1175ff	F.10:2	—	glass	—	—	—	—	DAJ; similar to bead 1175aa
1175gg	F.10:2	—	glass	10YR6/6 10 YR8/2	I.D.1.a	—	0.87 x 0.6	DAJ; fine trails perpendicular to the perforation

Table 13.1, *continued.* Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
1175hh	F.10:2	—	glass	—	I.D.1.a	—	0.8 x 0.6	DAJ; trails like bead 1175gg
1175ii	F.10:2	—	glass	10YR2/2	I.B.1.a	—	0.64 x 0.8	DAJ
1175jj	F.10:2	—	glass	10YR2/2	I.D.2.e	—	0.92 x 0.81	DAJ
1176a	F.10:5	—	glass	2.5Y8/6	I.C.1.a	—	0.5 x 0.56	striped in layers at right angles to perforation
1176b	F.10:5	—	glass	2.5Y5/6	I.B.1.a	—	0.35 x 0.64	DAJ; glass swirls decomposed to grayish black
1180a	F.10:4	—	quartz-carnelian	10R4/6	I.B.1.a	—	0.38 x 0.86	DAJ
1180b	F.10:4	—	glass	10YR2/2	I.D.1.a	III	0.8 x 0.5	DAJ
1180c	F.10:4	—	glass	10YR2/2	I.B.2.e	—	0.51 x 0.71	DAJ
1180d	F.10:4	—	decayed glass	10YR5/4 10YR8/2	I.D.1.a	—	0.93 x 0.67	DAJ
1182a	F.10:4	—	glass	5PB3/2	I.B.2.e	III	0.49 x 0.7	DAJ
1182b	F.10:4	—	glass	—	I.B.2.e	—	0.51 x 0.62	DAJ
1182c	F.10:4	—	glass	—	I.B.2.e	—	0.37 x 0.63	DAJ
1182d	F.10:4	—	quartz	10R4/6	I.B.1.a	—	0.53 x 0.9	—
1182e	F.10:4	—	glass	10YR6/2	XIII D.2.b	—	0.7 x 0.62	6-sided cylinder
1182f	F.10:4	—	glass	10GY6/4 5GY7/6	XII B.2.b	—	0.35 x 0.54	6-sided cylinder that has been cut from a rod
1182g	F.10:4	—	—	—	XII B.2.b	—	0.4 x .55	DAJ
1183a	F.10:5	—	glass	—	—	—	—	broken in half; 1 of 7 beads
1183b	F.10:5	—	striped glass	—	I.C.1.a	VIa	0.43 x 0.58	small lobe on each perforated edge; 2 of 7 beads
1187	C.1:60	14	glass	lapis blue	I.C.1.a	III	0.55 x 0.46	irregular diagonal across both perforated edges
1198	F.1:2B	—	faience	5GY7/2	I.C.1.a	VIa	1.15 x 1.41	melon with 9 gadroons
1199	F.1:5	—	faience	10YR7/4	I.C.1.a	VIa	0.95 x 1.18	melon type bead, but no gadroons
1203	F.5:4	—	silver?	—	I.B.2.b	VIb	0.32 x 0.75	—
1208	F.1:9	—	glass	10YR8/3	I.B.1.a	VIa	0.98 x 1.3	decomposed into several colors; Group XLVI (spot & eye bands); A.9.C; inserted cane
1209	F.5:4	—	glass	2.5Y5/6	XXIII	—	l ca. 1.85	3 beads; possibly a dove
1211a	F.5:4	—	glass	lapis blue	IV C.1.a	—	0.8 x 0.9	lenticular; 51 beads + small object
1211b	F.5:4	—	glass	lapis blue	I.C.1.g	—	1.15 x 0.65	pear-shaped, wound
1211c	F.5:4	—	glass	2.5Y5/4	XXII B.2.g	—	1.5 x 0.83	drop pendants, plain drops with rounded ends or rings for suspension
1211d	F.5:4	—	glass	2.5Y5/4	XXVI	—	0.77 x 0.61	pomegranate, but bottom is not notched
1211e	F.5:4	—	glass	2.5Y5/6	XXVI B.2.g	—	0.95 x 0.9	similar to bead 1211d, but larger, smaller end is not notched
1211f	F.5:4	—	glass	2.5Y5/6	XXXIII	—	—	head fragment & breast of a bird; reheated and reworked; cf. bead 1209
1211g	F.5:4	—	glass? + clay?	2.5Y7/4	I.B.1.b	VIa	0.8 x 0.95	black + brown speckles on yellow background
1211h	F.5:4	—	glass	lapis blue	IX D.2.b	—	0.72 x 0.5	translucent, corners cut off make side diamond
1211i	F.5:4	—	glass	2.5YR3/8	XXII B.2.b	—	1.23 x 0.71	plain drop pendant with rings for suspension

Table 13.1, *continued.* Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
1211j	F.5:4	—	—	dark gray	I.D.1.a	VII	0.9 x 0.5	dark gray material with brown flecks
1211k	F.5:4	—	glass?	black flecks	I.B.1.a	—	0.26-0.33 x 0.65-0.82	fabrication by mold or wound, badly decomposed; 11 or 12 beads
1211l	F.5:4	—	—	dark gray	I.B.2.b	—	0.3 x 0.46	decomposed
1211m	F.5:4	—	glass	2.5Y7/6	I.B.2.e	—	0.24-0.35 x 0.50-0.65	no beads of similar size and shape
1211n	F.5:4	—	glass	N/3	I.C.2.b	VIa	0.51 x 0.52	about 12 fine gadroons; 6 beads of similar size, shape, fabric and color; all gadrooned like melon beads, but much smaller
1211o	F.5:4	—	glass	dark gray	IV irreg.	—	0.65 x 0.63	perhaps an abnormal form of bead 1211n
1211p	F.5:4	—	glass	milky gray	I.C.1.a	VIa	0.66 x 0.65	milky gray with brown stripes parallel to perforation; circular indentation makes one side convex
1211q1	F.5:4	—	glass	shiny black	II C.1.c	—	0.36 x 0.58	2 affixed beads; elliptical cone shape
1211q2	F.5:4	—	glass	shiny black	I.D.1a	VII	1.72 x 0.42	ribbed with fine white spirals
1211r	F.5:4	—	glass	2.5Y7/8	IX D.2.b	—	2.14 x 0.49	yellow translucent; silvery material lining perforation? unusually long head; one side has remains of 2 blobs of glass, perhaps broken off bead as in bead 1211g or remains of glass when it was made; one end has slight collar
1211s	F.5:4	—	glass	5G5/6	XIII C.2.b	—	0.5 x 0.49	—
1211t	F.5:4	—	glass	lapis blue	I.C.1.a	III	0.63 x 0.65	—
1211u	F.5:4	—	glass	2.5Y6/6	irregular	—	?	3 beads; irregular shape; perhaps done by hand when fabric was soft; perforations large, ovoid and regular suggesting pressure around central core
1211v	F.5:4	—	bone/ivory	2.5Y8/4	I.D.1.a	—	0.7 x 0.46	polished
1255	unknown	—	agate	2.5Y4/4	I.D.1.b	—	0.98 x 0.8	brown, white and tan translucent stripes
1256	unknown	—	bone?	2.5Y7/8	I.B.1.a	VIa	0.85 x 0.92	3 concave "eyes" on the surface possibly originally filled with other material; a worked section of vertebra
1257	unknown	—	onyx	N4/	I.C.1.a	—	1.1 x 1.3	black and white banded; ground to reveal stripes, band of heavy gray, light gray strips, white with cracks
1258	unknown	—	glass?	10G8/2	I.B.1.a	VIa	1.0 x 1.35	decomposing
1259	unknown	—	glass?	5RP4/2	I.B.2.b	VIa	0.7 x 0.95	melon with 11 gadroons
1328	C.3:5	3	glass	clear	XIII C.1.a	—	1.96 x 0.94	DAJ; perforation makes a cloudy white cylinder in center
1349	F.12:4	—	glass	black	I.B.1.a	VIb	0.75 x 1.14	decomposing
1350	A.7:1	1	clay	5YR7/6	I.C.1.a	—	1.33 x 1.3	baked
1362	F.12:5	—	glass	2.5Y5/6	I.B.1.a	VIa	0.65 x 0.55	misshapen stripe of gray/green color, white and dark green trail
1416	C.3:21	8-10	clay	10YR6/2	I.C.1.a	—	1.25 x 1.33 ?	broken in half
1432	D.4:12	3	shell	2.5Y8/2	XXVIA.1	—	1.17 x 0.87	complete shell, cone shaped

Table 13.1, *continued.* Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
1440	A.7:48	3	glass	5G6/2	irregular	—	—	translucent; W 0.92; bead unfinished
1441	C.2:28	14	glass	2.5Y7/6	I.C.1.b	III	0.63 x 0.72	polished; a few small holes in one side
1446	B.3:56	14	glass	lapis blue	I.C.1.b	VIa med/lg	1.05 x 1.25	decorated ? with white
1447	D.6W:2	2-3	quartz	clear	XV	— B.2.bf	0.72 x 1.0	rock crystal with 7 sides
1459	G.1:23	—	faience	5B8/2	—	VIa	0.94 x 1.1	melon bead; 9 gadroons
1460	D.1:56	3	quartz-carnelian	5YR5/6	I.D.1.a	—	1.87 x 1.2	DAJ; "loaf"-shaped; mottled
1461	B.4:150	15?	glass	5B7/6	I.B.1.a + XLVI. A.7.b	—	0.62 x 0.92	DAJ; background is light blue, whitish near eye, circle with large dot in darker blue (5PB3/2); eyes are set on top of each other in 4 pairs
1464	C.2:22	6	glass	5B8/2	I.C.1.c	III	0.65 x 0.67	typical wound glass bead
1465	B.2:1	2	glass	10R4/8	I.C.2.b	—	0.55 x 0.55	faience core with thick red glaze?
1466	D.4:4	9	faience	2.5YR8/2	I.B.1.a	VIa	0.97 x 1.3	melon bead with 11 gadroons
1467	C.2:32	14	glass	10Y6/4	—	—	0.8 x 0.72 x 0.87	irregular cube of glass; unfinished bead?
1478	D.6W:69	2-3	serpentine	5G7/2	L.B.2	—	l 1.6 th 0.18	pendant, water-washed; W 0.6;
1480	F.16:6	—	glass	5Y6/4	XXVI B.3.d or B.2.g	—	1.59 x 1.11	DAJ: translucent; lotus seed vessel or pomegranate; cf. bead 1481
1481	F.16:6	—	glass	5Y6/2	—	—	1.62 x 1.09	DAJ; lotus seed vessel or pomegranate; cf. bead 1480
1482	F.16:6	—	glass	black & gold	XXII B.2.b	—	1.25 x 0.55	drop pendants with rings for suspension; multiple wound; cf. beads 1480 & 1481
1483	F.16:6	—	glass	2.5Y5/6	XXII B.2.b	—	1.3 x 0.72	translucent amber with black stripes; cf. bead 1482
1484	F.16:6	—	glass	5G6/2 5G6/2 gold	XVIII A.3.a L.1	—	0.6 x 0.5 0.8 x 0.5 1.10 x .65	spiral beads; iridescent blue-green; weathered
1485	A.8:1	1-3	glass	lapis blue	XVII A.1.a	—	1.45 x 0.54	mold made; multiple small segments
1507	F.18:5-7	—	glass	2.5Y4/4	X.A.2.e	—	0.35 x 1.0	mosaic glass beads; square canes were bundled, heated and drawn down to a small size, then cut off
1557a	F.18:13	—	glass	N/5	I.C.1.a	—	0.65 x 0.73	mottled; originally silver?
1557b	F.18:13	—	glass	gold	I.C.1.b	—	0.58 x 0.55	iridescent flecks; broken
1558a	F.18:13	—	glass	5G5/2	XIII D.2.b	—	1.55 x .33	—
1558b	F.18:13	—	glass	5BG6/6	—	—	1.8 x 1.3	broken
1559	F.18:13	—	quartz	clear	I.B.1.a	—	0.9 x 1.2	not symmetrical; has cuts in it
1560a	F.18:13	—	faience	5BG7/2	I.C.1.a	VIa	1.25 x 1.42	melon bead with 15 gadroons
1560b	F.18:13	—	faience	N/8	I.B.1.a	—	0.83 x 1.04	melon bead with 12 gadroons; small perforation for a melon; almost white underneath purplish adhesions
1620	G.3:2	—	glass	black	I.B.1.a	VIb	0.75 x 1.04	melon bead with 11 gadroons
1622	B.4: cleanup	13-14?	serpentine	5GY6/1	I.D.1.b	VIa	1.4 x 0.75	mottled; fractures in surface; cf. bead 1478

Table 13.1, *continued.* Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
1627	D.4:34	11	glass	black	I.C.1.b	—	0.53 x 0.55	black flakes off; somewhat irregular in shape
1660	C.2:40	15	steatite	10YR5/2	I.D.1.b	—	1.75 x 0.92	—
1663	G.3:24	—	olive pit	7.4YR5/4	—	—	1.63 x 0.75	one end has a "face" which is probably a natural formation
1679	B.2:75	15	coral	2.5YR6/6	I.D.1.b	—	0.6 x 0.4	one end cut on diagonal
1703	D.3:57A	14	faience	5B7/6	I.C.1.a	VIa	1.15 x 1.35	melon bead with 11 gadroons
1752	A.9:14	2	glass	N/3	I.C.1.a	VIa	0.52 x 0.58	collars at each end
1753	D.2:45	?	quartz-carnelian	2.5YR5/8	I.C.1.a	I	1.04 x 1.07	opaque; evenly colored
1775	G.5A:8	—	?	7.5R4/8	IV B.1.e	—	0.34 x 0.9	probably modern plastic opaque
1813	C.6:17	3	amber	10R3/6	I.B.2.b	VIa	0.4 x 1.0	—
1826	C.5:50	14-15	glass	10GY4/4	I.B.1.a?	—	1.0 x 0.54	translucent; 2 beads affixed together
1840	C.5:50	14-15	quartz-carnelian	2.5YR5/8	X B.2.b?	II	0.9 x 0.75	banded; half a bead cut along axis
1859	D.2:43	11	glass	5GY6/1	XXII B.2.b	—	1.1 x 0.6	cf. beads 1482 & 1483
1862	C.6:17	3	faience	BG7/2	XLIX	—	0.97 x 1.13	irregular bead; perforated; molded by hand? no attempt at a specific shape
1863a	C.6:16	2-3	glass	N/B	I.B.1.a	—	0.2 x 0.3	probably an earring pendant; 7 originally light blue beads
1863b	C.6:16	2-3	glass	N/B	I.B.1.a	—	0.2 x 0.3	similar to bead 1863a
1863c	C.6:16	2-3	glass	N/4	XVIII	—	0.3. x 0.3	decomposed; spiral?
1863d	C.6:16	2-3	glass	lapis blue	X.D.2.b	VIb	1.1 x 0.6	translucent
1863e	C.6:16	2-3	glass	N/4	I.D.2.b	—	0.62 x 0.2	weathered cylinder beads
1863f	C.6:16	2-3	glass	N/4	I.C.2.b	—	0.28 x 0.2	weathered cylinder beads
1863g	C.6:16	2-3	glass	N/4	I.D.2.b	—	0.64 x 0.2	weathered cylinder beads
1870	C.5:68	6	glass	2.5Y5/6	I.B.1.c	—	0.6 x 0.84	translucent
1871	C.5:68	6	agate	7.5YR7/2	I.C.1.a	—	0.95 x 1.05	banded, grays; little dents on surface
1872	D.2:74	14-15	glass	5B5/6	I.B.1.a	—	0.25 x 0.3	—
1898	C.6:20	2	glass	5G4/1	X.B.2.b	—	0.5 x 0.85	broken; facets on one "side" while the other is flat
1907	G.6:17	—	bronze	—	I.D.2.b	VII	0.64 x 0.46	shiny brass base, corroded
1909	E.4:3	—	shell	10YR8/8	—	—	0.1 x 0.95	appears to be half of a tiny clam shell
1926	D.2:95C	14	faience	5B7/6	I.B.1.a	VIb	1.1 x 1.3	melon bead with 8 crudely made gadroons
1956	A.8:24	2-3	glass	7.5YR5/8	I.C.1.b	III	0.85 x 0.8	"trail decorated" cane bead; tan and white stripes in swirls
1967	A.8:24	2-3	glass	5Y6/8	I.B.1.b	—	0.4 x 0.7	—
1976	C.6:23	3	quartz-carnelian	7.5YR5/8	—	—	1.5 x 0.8 x 0.4	fragment; evenly colored
2002	C.5:59	13	glass	variegated	I.C.2.c	—	1.36 x 0.9	DAJ; colors translucent 5Y5/6, N8, 5P4/2, 5Y6/1
2004	A.9:54	3	glass	10G6/2	I.C.2.b	VII	0.84 x 0.35	cut from cane
2006	C.3:61	3	glass?	N2, shiny	I.C.2.b	—	0.86 x 0.85	DAJ
2018	F.23:2	—	glass	5R3/8	I.B.6.be	—	0.45 x 0.75	—
2024	C.6:23	3	faience	5GY6/1	I.B.7.bdf	—	0.82 x 1.55	shape is a combination of straight, convex and concave lines
2031	A.9:19	2	glass	black	XIII C.2.b	—	0.6 x 0.65	hexagonal; cut diagonally from rod or cane; cf. bead 2032

Table 13.1, *continued.* Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
2032	A.9:19	2	glass	lapis blue	XIII C.2.b	—	0.6 x 0.6	translucent, hexagonal shape, cut diagonally from rod or cane
2033	C.3:61	3	glass	7.5YR8/4	IID.1.a	—	1.15 x 0.9	decomposing, not symmetrical; wound bead
2035	C.6:23	3	glass	lapis blue	I.B.1.a	VIa	0.51 x 0.75	silvery iridescent, flakes off, deep blue below
2037	G.10:1	—	faience	10G8/2	I.B.1.a	VIb	1.0 x 1.2	melon bead; 13 gadroons with fine separation lines
2044	C.8:2	2	pearl?	2.5YR8/6	I.C.1.a	II	0.81 x 0.9	perforation drilled from both ends; shell-like texture
2068	C.6:25	3	glass	7.5YR8/2	I.B.1.c	—	0.6 x 0.84	wound bead with black flecks
2069a	G.10:19	—	glass	5R6/1	I.D.1.b	—	0.75 x 0.5	beads blown into a crimped mold and broken off
2069b	G.10:19	—	glass	5YR5/2	±I.D.1.b	—	0.75 x 0.55	pressed into irregular shape probably while hot; wound bead
2069c	G.10:19	—	glass	N/3	I.D.1.b	—	0.9 x 0.7	black flacks off, silvery below; fabrication like bead 2069a
2069d	G.10:19	—	glass	5YR5/2	I.D.1.b	—	0.75 x 0.56	irregular in shape, pinched
2069e	G.10:19	—	glass	5YR5/2	I.D.1.b	—	0.85 x 0.62	brown flakes off; iridescent gold below; same shape as beads 2069b and 2069d
2073	G.10:13	13	glass	—	I.D.1.b	—	0.6 x 0.37	decomposing; probably made in a crimped mold and broken off
2087	D.4:64	11	bronze	corroded black	I.B.1.a or I.B.1.e	VIb extra large	0.73 x 1.4	may not have been used as a bead
2204	C.8:16 cleanup	?	glass	5B7/1	I.C.1.b	—	0.65 x 0.55	iridescent; not symmetrical; pressed while hot; ends cut diagonally form a cane
2214	G.11:2	—	quartz	clear	XVB.2.f	—	0.65 x 1.13	translucent rock crystal; cf. bead 1447
2215	C.5W:84	14-15	glass	black	I.C.1.c	III	0.76 x 0.8	black shiny glass with grayish flecks
2216	G.11:1	—	glass	5Y6/1	IID.2.b	—	1.01 x 0.75	meant to be a cylinder? squeezed while still hot; originally black?
2217	C.1:122	?	glass	black	I.C.1.a	—	0.85 x 1.06	shiny black with tan flecks; very symmetrical and smooth
2220a	C.5W:87	3	glass	N7 + 5B7/1	I.B.1.c	III	0.62 x 0.78	bronze chain with glass beads; wound
2220b	C.5W:87	3	glass	N7 + 5B7/1	I.B.1.c	III	0.45 x 0.84	wound
2220c	C.5W:87	3	glass	N7 + 5B7/1	I.B.1.c	—	0.54 x 0.82	point of extra glass
2234	G.11:3	—	glass	—	I.C.2.b	VIa	0.7 x 0.8	weathered; iridescent gold; trail of glass decoration in zig-zags; probably originally black; A.3.a single wave
2256	C.5W:87	3	bone	10YR8/2	I.C.2.d	—	2.55 x 0.66	—
2257	C.1:123	14?	steatite	10R6/1 10R5/1	I.D.6be	II	1.62 x 1.01	white and chalky underneath
2258a	C.5W:89	3	glass	5PB5/2	I.B.1.a	—	0.49 x 0.7	—
2258b	C.5W:89	3	glass	5G6/2	I.B.1.a	—	0.41 x 0.62	—
2276	C.5W:94	3	glass	5PB3/2	I.B.1.a	—	0.57 x 0.7	shape almost 1.b
2278	A.8:44	?	glass	black & white	I.D.1.a	—	1.1 x 1.0	trail-decorated cane bead; XLVII. A.4.b "folded scrabble beads"; folding layers of glass of different colors in an irregular manner; cf. bead 1956
2314	C.6E:28	3	glass	5B6/6	I.B.1.a	—	0.2 x 0.35	—

Table 13.1, *continued.* Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
2357	G.11:7	—	glass	5PB3/2	I.C.1.c	III	0.55 x 0.61	—
2363	C.8:22	3	glass	5Y7/8	I.C.1.c	III	0.7 x 0.8	translucent
2382	C.5:101	3	coral	10R5/8	I.D.2.b	—	1.55 x 0.55	approximately cylinder-shaped
2387	C.5:104	?	glass	black	I.D.2.b	—	2.4 x .67	shiny black with flecks of white; cut from cane; long cylinder
2422	C.5:103	3	glass	lapis blue	I.C.2.b	III	0.6 x 0.7	—
2428	C.1:126	18	quartz-carnelian	7.5R4/8	—	—	1.35	frag.; top of a pendant-type bead; mottled; W 0.5
2440	C.1:123B	17	obsidian	N/4	I.C.1.a	—	0.96 x 1.14	some lines or striations around one end of the perforation
2441	A.10:4	1-2	glass	black	I.B.1.a	III	0.55 x 0.63	very tiny lighter flecks
2448a	F.30:2	—	glass	black	I.C.1.a	—	0.67 x 0.59	collared; probably from mold; cut off
2448b	F.30:3	—	glass	black	I.B.1.b	—	0.55 x 0.7	appears to be cut off
2455	F.31:9	—	burned glass	N/4	I.D.2.b	VIa	0.97 x 0.68	one end slightly larger than the other
2486	D.4:108	13	quartz-carnelian	10R4/8, 4/6	I.C.1.b	II	0.56 x 0.52	mottled color
2487	C.9:10	2	glass	5Y7/6	I.B.1.a	—	0.56 x 0.75	originally translucent; slightly pressed wound bead
2488	C.6:48	3	glass	5B7/6	I.B.2.b	—	0.5 x 0.45	cut off a glass cane or rod; one end is diagonally acute
2502	B.7:27	11	faience	5B8/2	I.C.1.b	VIa	1.25 x 1.5	melon bead with ca. 7-12 gadroons; XXIII
2503	D.4:106	13	glass	gray	I.C.1.a	—	1.02 x 1.0	probably originally lapis blue
2517	C.6:54	3	glass?	N/4	I.B.1.c	—	0.65 x 0.8	wound bead?
2556	C.6:58	3	glass	N/4, N/5	I.D.1.b	—	0.85 x 0.71	made in a mold: cut at ends; may have had a striped decoration; now weathered
2584	F.28:23	—	glass	silvery 2.5Y8/6	I.B.2.a	VIa	0.64 x 0.9	has yellow stripes
2602	G.13:4	—	faience	5B7/6	I.B.2.b	VIa	0.71 x 1.11	slightly pressed ring
2603	C.8:9	3	amber	5R3/6	I.C.2.b	—	0.8 x 0.79	ring; cf. bead 1214
2613	G.13:16	—	faience	5B7/6	I.D.1.c XIII D.2.c	VI	0.85 x 0.55	one end is circular; 6 flat surfaces with indentation in each along most of the bead length
2614	G.13:16	—	glass	5R4/6	I.D.1.a	—	1.35 x 1.2	XLVI.A.9.C “flush eye cane”; distinctive feature is closely set cane “eyes” on carnelian-red background
2629	C.9:14	2	agate	10YR5/6	I.D.1.a	II	1.4 x 0.4	XLVII.A.1.a single stripe of white in wavy line bisects length around perimeter; translucent brown with lighter bands; one end is a pinched square
2631	F.38:2	—	agate	10R5/8	I.D.2.f	I	1.6 x 1.17	perforation is bored from both ends; opaque
2645	F.30:3	—	glass	N/5 with 2.5Y6/8 below	I.B.1.a	VIa	0.85 x 1.47	XLVII “zone” bead; single white trail; wound at right angles to axes; pressed irregularly
2677	C.8:25	3	amethyst	5P6/2	I.B.2.f	—	0.46 x 0.8	cf. bead 694
2678	C.10:29	3	quartz-carnelian	7.5R4/8	XV B.2.b.f	II	0.67 x 0.97	7 facets; translucent; evenly colored
2684	F.27:23	—	agate?	5YR5/8	I.C.1.b	I	1.2 x 1.5	mottled color

Table 13.1, *continued.* Beads.

Object No.	Locus	Stratum	Material	Munsell #	Type	Perforation	Dimensions (l x dia)	Remarks
2685a	F.27:23	—	glass	5R5/2	I.A.2.b	—	0.54 x 0.15	cut off cane rod
2685b	F.27:23	—	glass	5R5/2	I.A.2.b	—	0.52 x 0.17	cut off cane rod
2687	C.6:76	3	glass	10R4/8	I.C.2.b	—	0.45 x 0.48	appears to be cut diagonally from rod
2688	G.14:17	—	quartz	5Y8/1	I.C.1.a	—	0.85 x 0.99	rock crystal
2689	F.38:2	—	glazed clay	7.5R4/8	I.C.4.fb	VIa	0.88 x 1.05	seam has been ground off; smooth perforation; bright color; opaque; modern?
2715	C.5:181	6	glass	black base	I.B.1.a	VIb	0.7 x 1.6	impressed glass; lavender and white crumbs; not symmetrical
2741	A.9:19	2	glass	lapis blue	XIII C.2.b	—	0.61 x 0.57	cut from cane; one end more diagonal; hexagonal
2750	F.37:8	—	glass	N/3	I.B.1.a	VIa	0.57 x 1.2	weathered
2777	C.10:38	11	glass?	silver	I.C.1.b	—	1.18 x 1.3	XLVII.A.1.a striped decoration; wound bead; black flecks off silver below; red, cream and green bands
2804	C.8:46	3	agate	7.5R6/5	I.D.1.a	—	1.1 x 0.9	color + smooth grinding are distinctive features; hole drilled smoothly, opaque whitish and light red; cf. bead 2631
2805a	F.37:8	—	glass	originally clear	X C.2.b	—	0.65 x 0.62	cut from rod; rectangle with corners cut off, making 4 diamonds
2805b	F.37:8	—	glass	N/5 approx.	I.C.1.e	—	0.62 x 0.62	wound bead; one end pinched with wide perforation
2817	F.38:3	—	glass	N/3 with gold	I.C.2.e	—	0.7 x 0.8	one end pinched resulting in large perforation; weathered
2851	survey site 149	?	jasper	10R4/6	I.A.2.b	—	0.36 x 1.22	ground unevenly; shiny opaque surface
2869a	F.38:3	—	glass	black	I.D.1.a	—	1.0 x 0.77	pressed with one end and large perforation
2869b	F.38:3	—	glass	7.5R5/2 + silver	I.B.1.e	VIa	0.66 x 0.75	iridescent
2870	F.38:3	—	glass	gold	XIII	—	1.7 x 0.6	glass bead that has been gilded; gold leaf appears to have been fused to the surface; ends are broken
2895a	F.38:3	—	glass	iridescent silver	I.B.1.b	—	0.62 x 0.76	decomposing
2895b	F.38:3	—	glass	5G6/2	I.B.1.b	—	0.38 x 0.5	translucent; originally green; iridescent
2896	C.6:30	3	glass	NB/	I.B.1.c	—	0.5 x 0.73	powdery
2908a	F.37:6	—	glass	gold N/3	I.D.5.bf	—	0.8 x 0.6	mold
2908b	F.37:6	—	glass	gold N/3	I.D.5.bf	—	0.77 x 0.61	mold
2908c	F.37:6	—	glass	black	I.C.5.bf	—	0.88 x 0.87	mold; iridescent; flaking
2909	F.38:11	—	glass	black	I.D.2.b	VII	1.25 x 0.84	with flecks of tan; translucent
2917a	F.37:18B	—	glass	N/4	I.B.1.c	—	0.4 x 0.5	gray; pressed; ordinary wound bead
2917b	F.37:18B	—	decomposed glass	gold	I.B.1.a	—	0.5 x 0.4	broken; gold fused with glass

Late Islamic-period glass beads from Hesban is the "wound" type, but there are also a few of the "cut-from-canes" variety (Objects 60, 227, 338, 2004, 2032, 2741). The majority are translucent blues and greens, but a number are yellow, opaque and translucent. Beads from this period were for the

most part found individually rather than in groups, in burials, though a number came from loci C.1:4,5 and 6; C.5 and 6; and D.6:33, all from Stratum 3.

According to Beck's (1928) classification system, many of these beads are classified as I.B.1.a, i.e., regular rounded, circular in perimeter (I); short, where the length is more than 1/3 and less than 9/10 diameter (B); with a convex profile, oblate, where the profile meets the perforation (1.a). The majority of the remainder fall into a variety of forms, but two other frequently found classes are I.C.2.b, of which object 2006 (fig. 13.1:9) is a notable specimen, and I.B.1.c (e.g., Objects 2220a-c, cf. fig. 13.1:10). The former have a circular perimeter (I); and are standard, where the length and diameter are approximately equal (C); and cylindrical, where the profile is one straight line parallel to the axis (2.b). This form is characteristic of the cut-from-cane type. The latter form is typical of wound beads i.e., a circular perimeter, short, convex cone type, in which the curved profile meets the perforation at one apex.

A few beads deserve special discussion. Object 264 is a wound body of lapis-colored glass with a grey trail at right angles to the axis. The middle of its trail has traces of a finer light-blue trail. This is known as a Zone bead (XLVII.A.l.a). Object 349 is a wound body made of black glass with fine silver-colored striations and many closely placed spots of cream, red, and blue. Beck (1928) designates the same type as "impressed glass crumb." Guido (1978) classifies it as "14 mottled." Object 1328 (fig. 13.1:11) has a regularly faceted, hexagonal, long, convex profile and is ellipsoid. Object 1507 (fig. 13.1:12) is a set of 10 separate but matched beads classified as X.A.2.e (rectangular, disc, bicone). Their distinctive feature is that they are composed of square opaque glass canes which were bundled, heated and shaped to a small size, then sliced off, making a mosaic effect. Their colors are grey, red, and olive brown. Object 1956 (fig. 13.1:13) is now tan with white stripes and swirls, which Goldstein (personal communication) calls a trail-decorated cane bead. Object 2614 (fig. 13.1:14) is a flush-eyed cane of grey and white, set in a carnelian-red background, and Object 2917b has gold leaf which is fused with the glass. Object 1863 (fig. 13.1:15) belongs to a group of seven beads strung on a bronze wire, thus producing an earring-pendant with hooks at each end. It measures over 4.5 cm along its entire length.

Two black glass melons (Objects 1259 and 1620; fig. 13.1:16), both of unknown provenance, were also found at the site. Its distinctive feature is a series of gadroons (grooves) running parallel to the perforation, giving the effect of segments of a cantaloupe. Other glass beads include Objects 29, 56, 681, 1172c,d,e,f, 1175a,h,k,jj, 1180b, 1349, 1362, 1446, 1464, 1465, 1859, 1898, 2002, 2018, 2278, 2363, 2556, and 2870; figs. 13.1:17-23 and 13.2:1-18).

Faience

Thirty-five faience ("glazed" ceramic) beads were found at Hesban. Examples of this type of beads include Objects 281 and 2613 (fig. 13.2:19-20). The most important category of this type of bead is the "melon," of which there are 15 specimens (Objects 408, 591, 700, 704, 1125, 1167b, 1198, 1459, 1466, 1560a,b, 1703, 1926, 2037 and 2591. The typical color of faience is a strong turquoise blue. In various stages of weathering, faience becomes "(pale) green" to "yellow-green."

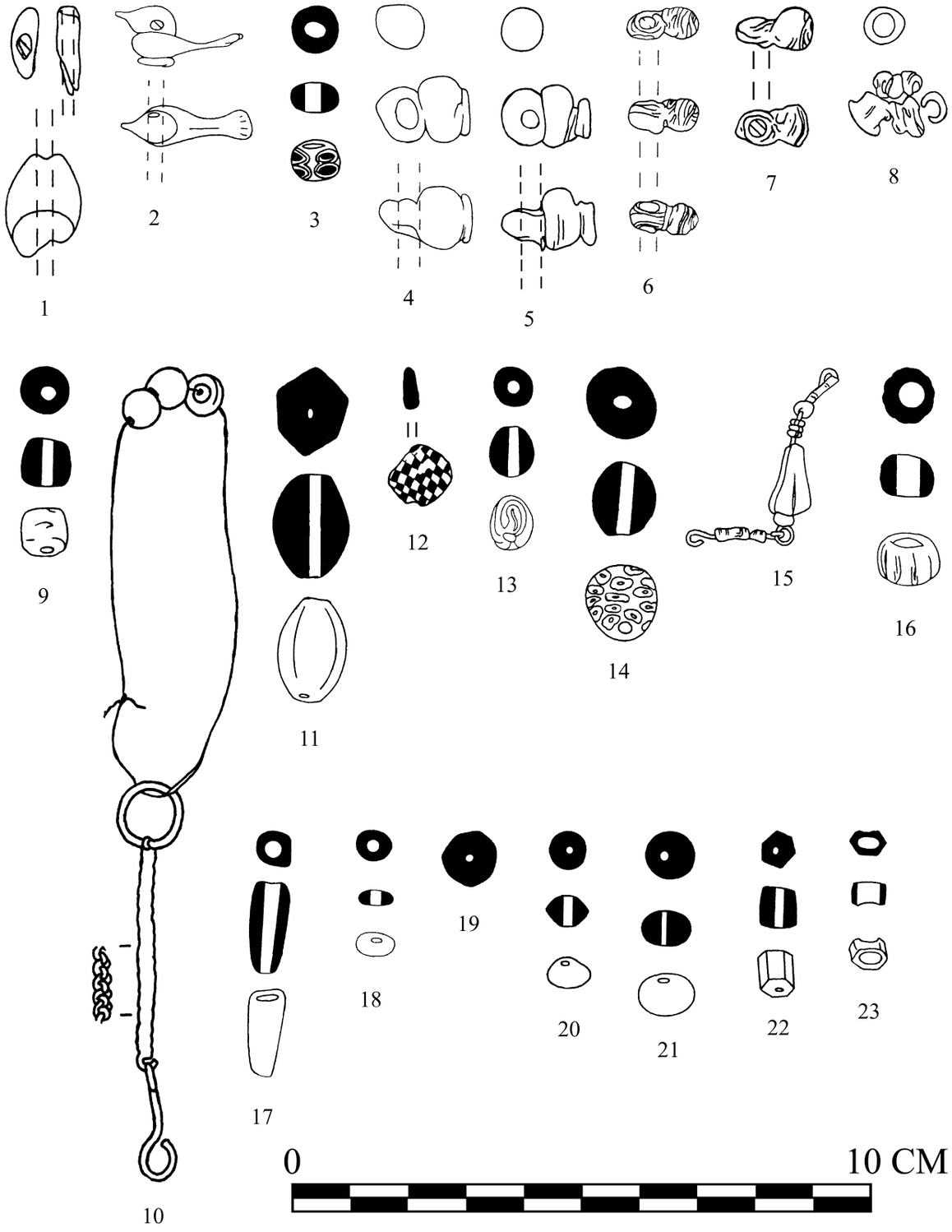
Stone

There are 56 objects made of various types of stone among the bead finds. The most frequent semiprecious stone (25 of them) was carnelian. Beads made of carnelian include Iron Age bead (Object 2428); Objects 693, 697, 701, 708, 709, 710, 711, 1180a, 1182d, 1840, and 2486 from the Roman period; Objects 382, 617, 722 and 757 dated to the Byzantine period; Objects 557, 658, 904, 1144, 1460 (fig. 13.2:21), 1976 (fig. 13.2:22), and 2678 from the Late Islamic period; and Objects 335b and 1753 which could not be dated.

Most of these beads are mottled and banded in the orange-red colors, though nine are evenly colored and two are faceted (Objects 382 and 2678), the latter with a parallel to one from Samaria (Crowfoot, Crowfoot and Kenyon 1957: 393, 397; fig. 92.74).

Other stone beads were made from clear rock crystal (Objects 696, 702, 712, 908, 1447 [fig. 13.2:23], 2214 and 2688); agate (Objects 689, 723, 1255 and 2629, fig. 13.2:24); amethyst (Objects 694 and 2677); onyx (Object 1257); red jasper (Object 2851); and smokey quartz with rutile inclusions (Object 864). Beads made from green serpen-

Figure 13.1 Beads.



tine include three that are pendants (Objects 340, 379 [fig. 13.2:25], and 1478, fig. 13.2:26),and a cylinder bead (Object 1622, fig. 13.2:27).

Other Materials

Other materials that were used to make the beads include coral (Objects 176, 265 [fig. 13.2:28], 802, 812, 828, and 1679), metals including bronze (Objects 758, 1907, and 2087), and silver (Object 1203); shell (Objects 1432 [fig. 13.2:29] and 1909); amber (Objects 1813 [fig. 13.2:30] and 2603); bone (Objects 299 [fig. 13.2:31], 1211v, 1256 and 2256); olive pit (Object 1663); clay (Objects 1350, 1416 and 2689 [fig. 13.2:32]) and pearl (Object 2044).

Bangles

In archaeological reporting the artifacts under discussion are frequently designated as "bracelets," which by definition denote ornamental bands, rings, or chains worn around the wrist. However, since some of these artifacts have been found in a position near the ankles and upper arms of skeletons in burials, or depicted on these same body parts on statues and friezes, the term bracelet with its wrist associations is too narrow. Generally these objects are ring-shaped, firm and stable in texture, and can be worn several at a time. Hence, the term "bangle" which is a stiff, usually ornamental bracelet or anklet, that can be either slipped or clasped on the body (Merriam-Webster) seems to be more appropriate. Sixty-three whole bangles and 43 fragments (Table 13.2) were found at Hesban.

The most significant measurement in bangle classification is the full outer diameter. This particular measurement can give an indication as to where on the body the piece was worn. In some cases the bangles could be readily stretched for removal or application because the base wire is appropriately thin. On the other hand, some objects were constructed of heavy, inflexible material of a size that suggests they were permanently crafted into place. The diameters of complete Hesban bangles range from 3.4 cm to 8.2 cm. Because many of the smaller ones were found in connection with infant or child burials, a suggested range would be: infant bangles starting at 3.4 cm, child bangles from 4.8 to 5.3 cm, and adult bangles from 5.5 to 6.5 cm for those worn on the wrist, 7.3 cm and above for those worn on the upper arm, and anklets starting at ca. 8 cm.

Typology

The basic division of bangles into solid rings and those with two ends can be further classified by the ornamentation of the finials, the fastening or clasp, and the decoration on the base.

Solid Ring specimens are classified as Type Ia: plain (Objects 760, 1005, 1157, 1178, 1191, 2601; fig. 13.3:1-6). Solid bangles can be further classified as Type Ib: ribbed (Objects 759, 761, 1000, 1177; fig. 13.4:1-4) and Type Ic: twisted (Object 748; fig. 13.4:5).

Bangles with two ends are classified as Type IIa: plain (Objects 641, 1164, 1171, 1379, 1380, 1493, 1494, 1495, 1498, 1513, 1514, 1551, 1552, 1553, 2396, 2417, 2426, 2853; figs. 13.5:1-9 and 13.6:1-9); Type IIb: with decorated or shaped finials (Objects 155, 1065, 1326, 1397, 1835, 2075, 2222, 2679; fig. 13.7:1-8); Type IIc: with twisted fasteners and a plain base (Objects 592, 667, 960, 1069, 2395, 2539, 2693, 2751, 2773; figs.13.8:1-5 and 13.9:1-4); Type IId: with twisted fasteners and base, or imitation twists indicated by striations (Objects 635, 690, 714, 1159, 1221, 2447, 2496, fig. 13.10:1-7); and Type IIe: twisted base only (Object 640, 862; fig. 13.11:1-2).

Those bangles that exhibit unique characteristics are categorized as Type III. Object 346 (fig. 13.11:3) is a fragment of an ornate bronze bangle. The piece is bent into an unusual shape, and is 10.4 cm long and 0.5 cm wide. The edge which would rest against the body is flat, and the outer side rounded, making a D-shaped cross-section. The outer side is marked with diagonal lines that change directions in regular series. Most notable is the one finial which is present. The bangle metal is flattened so that the end is thinner and wider (0.7 cm) with a stamped design of curves and ovals. Object 531 (fig. 13.11:4) is a fragment of a bronze bangle with chevron decorations set at intervals. It is bent into an unusual shape. The cross-section is triangular. An interesting parallel is found at Corinth (Davidson 1952: 263; pl. 112, no. 2070). Object 1363 (fig. 13.11:5) is a fragment of an iron bangle that is notable for an enlarged area that suggests at least two flower blossoms in relief. Object 1819 (fig. 13.11:6) is a bronze bangle fragment with a six-sided band. It is currently 3.4 cm long, but its curve suggests an object that was originally ca. 7.1

Figure 13.2 Beads.

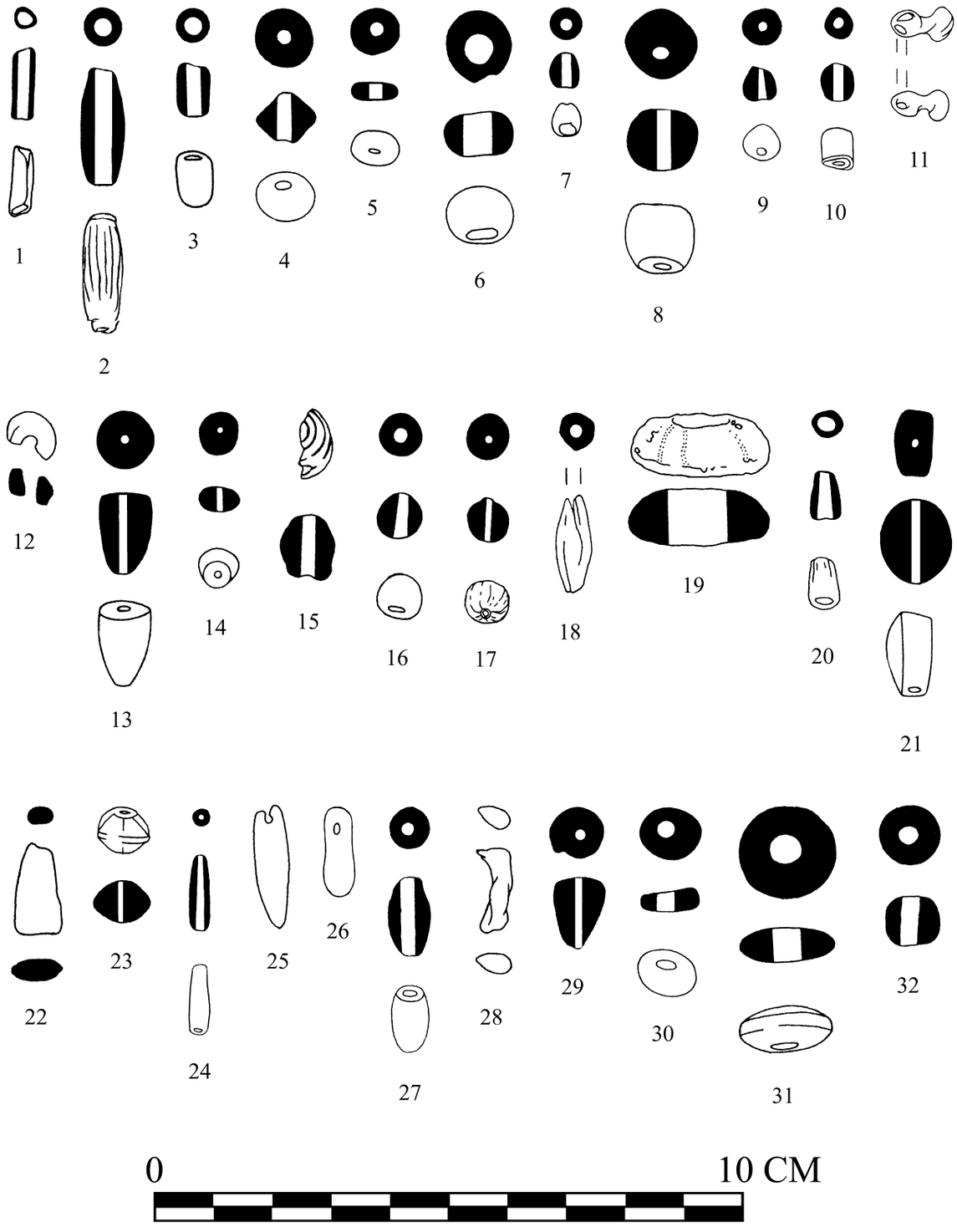


Table 13.2 Bangles.

Object No.	Locus	Stratum	Material	Type	Diameter	Remarks
155	C.3:1	2	bronze	IIb	5.5	DAJ; stamped design
327a	?	—	glass	var.	—	9 pieces of at least 6 type of bangles
346	C.4:25	3	bronze	III	—	frag.; decorated finial; stamped
531	B.4:11	4	bronze	III	5.15	chevron designs
547	A.5:4	3	glass	Ib	—	frag.; ridged design
587	F.4:4	—	iron	Ia (?)	—	frag.; badly corroded; 6 pieces; piece "e" has remains of cloth
592	F.4:5	—	bronze	IIc	4.85	—
599	A.5:4	3	bronze	IId or IIe	—	frag.
604	C.5:3	3	bronze	IIb	—	frag.; thickened finial; imitation twists
608	F.6:2	—	iron	IIb	6.75 ?	frag.; wire twisted around ends?
635	F.6:5	—	bronze	IId	5.0 ?	twisted over core
640	F.6:10	—	bronze	IIe	5.2	—
641	F.6:11	—	bronze	IIa	4.2	—
667	F.6:5	—	bronze	IIc	7.3	—
690	F.6:12	—	silver	IId	5.3	—
714	F.6:12	—	silver	IId	5.3	cf. 690
725	F.6:13	—	bone	Ia (?)	3.6	frag.
748	F.4:5	—	glass	Ic	5.2	DAJ; 5Y 7/6 "yellow"; and 10 YR 5/4 "brown"
754	F.6:13	—	bone	Ia (?)	3.6	frag.
759	F.4:7	—	glass	Ib	4.8	black
760	F.4:7	—	glass	Ia	5.0	cf. 759
761	F.4:7	—	glass	Ib	4.75	cf. 759 and 760
818	A.5:17	9	bronze	Ia or IIa	3.95	frag.
862	D.5:5F	3	bronze	IIe	7.5	—
873	F.10:7	—	iron	Ia (?)	—	frag.
934	D.6:33C	3	bronze	IIa	6.2	frag.
960	F.8:6	—	bronze	IIc	3.37	overlapped; bent
999	F.1:2	—	iron	Ia (?)	4.2	frag.
1000	F.1:2	—	glass	Ib	5.39	DAJ; dark grey with flecks
1005	F.10:8	—	iron	Ia	8.0	—
1006	F.10:8	—	iron	Ia	7.89	—
1061	F.1:2	—	bronze	IId	—	frag.; twisted fastener only
1065	F.10:2	—	bronze	IIb	3.71	—
1069	F.10:6	—	bronze	IIc	7.64	—
1072	F.10:6	—	bronze & iron	—	—	5 badly corroded frags.; 2 have disc-like frag. attached
1074	F.10:4	—	bronze	IIb	4.35	—
1157	F.1:2	—	glass	Ia	5.9	DAJ; brown and dark grey
1159	F.1:2	—	bronze	IId	4.5	—
1163	F.1:2	—	iron	Ia (?)	4.05	frag.
1164	F.1:2	—	bronze	IIa	5.68	—
1170b	F.10:6	—	gold	IId	—	frag.
1171	F.10:5	—	bronze	IIa	3.6	—
1174	F.10:4	—	iron	Ia (?)	—	frag.
1177	F.10:5	—	glass	Ib	4.82	DAJ; black
1178	F.10:5	—	glass	Ia	4.89	—
1191	D.6:33E	3	iron	Ia	5.6	—
1221	F.1:8	—	silver	IId	4.85	—
1326	D.4:1	2	bronze	IIb	8.5	decorated finials; stamped, pulled apart
1334	G.2:2	—	iron	Ia	6.2	frag. of 2 bangles corroded together
1337	G.2:2	—	iron	—	4.8 ?	frag.

Table 13.2, *continued.* Bangles.

Object No.	Locus	Stratum	Material	Type	Diameter	Remarks
1338	G.2:2	—	iron	—	3.8 ?	frag.
1360	F.12:4	—	iron	IIb	6.5	frag.; shaped finial
1363	F.12:5	—	iron	III	4.9	flower design?
1379	F.12:6	—	iron	IIa	5.4	—
1380	F.12:5	—	bronze	IIa	4.2	—
1381	F.12:5	—	bronze	IIa ?	5.0	frag.
1397	F.14:1	—	bronze	IIb	4.6	snake's-head-shaped finial
1493	F.16:5	—	bronze	IIa	6.0	—
1494	F.16:6	—	bronze	IIa	3.4	—
1495	F.16:6	—	bronze	IIa	3.8	—
1498	B.2:18	4	bronze	IIa	6.8	—
1513	F.16:5	—	bronze	IIa	5.59	—
1514	F.16:5	—	bronze	IIa	6.3	—
1551	F.16:5	—	iron	IIa	5.9	cloth remains adhering to it
1552	F.16:5	—	bronze	IIa	6.6	—
1553	F.16:5	—	bronze	IIa	6.6	—
1819	C.6:11	2	bronze	III	7.1 ?	frag.; 6-sided crosssection; indentations
1835	F.22:5	—	bronze	IIb	5.5	—
1922	C.6:18	2	iron	IIa ?	—	frag.
1953	G.9:2	—	bronze	?	?	frag.; straight, 4.9 cm long; triangular crosssection
1977	D.4:61	3	iron	Ia	5.05	—
2075	C.6:25	3	bronze	IIb	4.7	snake's-head finials
2222	G.4:10	—	bronze	IIb	7.3	DAJ; finials have X's
2255	F.27:6	—	glass	Ia ?	—	frag.
2262	C.10:1	2	glass	Ib	—	frag.
2320	G.11:11	—	glass	Ia ?	4.5	frag.; deep blue
2342	C.5:94	3	iron	Ia ?	4.4	frag.
2346b	F.27:7	—	bronze	III	5.1	with button dangle
2361	C.5:94	3	glass	Ic	—	frag.; various colors
2391	C.5:101	3	glass	Ic	—	frag.
2395	F.27:8	—	bronze	IIc	—	pulled apart
2396	F.27:8	—	bronze	IIa	6.85	pulled apart
2417	C.6:2	3	bronze	IIa	3.57	DAJ
2425	F.30:3	—	iron	IIa	4.9	frag.
2426	F.30:3	—	iron	IIa	5.1	—
2427	F.30:3	—	iron	Ia ?	—	frag.
2447	F.30:3	—	bronze	IId	5.0	—
2461	F.27:8	—	bronze	III	4.7	line of dots
2496	F.27:9	—	bronze	IId	8.0	pulled apart
2530	C.5:132	3	glass	Ia ?	—	black
2539	F.31:8	—	silver	IIc	4.1	—
2549	F.31:8	—	iron	Ia & IId	—	6 frags.
2550	F.30:3	—	iron	Ia ?	—	5 frags.
2562	F.27:13	—	iron	Ia ?	—	frag.
2567	C.5:149	3	bronze	IIb	—	frag.; flattened finials
2601	F.34:4A	—	iron	Ia	4.8	—
2679	G.14:13	—	bronze	IIb	4.65	flattened finials
2680	F.27:23	—	iron	Ia ?	—	frag.
2693	F.27:25	—	bronze	IIc	6.1	fastener is partially untwisted
2751	F.31:21	—	bronze	IIc	3.7	—
2773	F.31:21	—	bronze	IIc	3.7	—

Table 13.2, *continued*. Bangles.

Object No.	Locus	Stratum	Material	Type	Diameter	Remarks
2792	C.9:37	2	iron	Ia ?	6.2	frag.
2852	K.1:4	—	glass	Ib	4.3	frag.
2853	F.38:10	—	bronze	IIa	4.5	—
2860	F.38:3	—	glass	Ia	7.5	—
2915	F.37:18B	—	iron	Ia ?	—	frag.

cm across. Object 2461 (fig. 13.11:7) is a broken bronze bangle which has a flattened outer surface with a single line of stamped dots extending along its length.

Type Ia bangles were found during all periods of occupation at the site and is probably the largest category when the fragments are included. The majority of the complete glass bangles are from the Byzantine period. Type IIa is the second largest category and was the most popular for making metal bangles. Again the majority of the complete examples of this type are from the Byzantine period. Type IIb includes some of the most artistic examples. The majority of this type were from the Middle and Late Islamic periods. Types IIc and IId, the latter including two bangles made of silver (Objects 690 and 714; fig. 13.10:2-3), seem to have been popular during the Roman period.

Basic techniques and designs were followed as classic patterns. There is the possibility that within a certain tomb a single style prevailed for some time. In Tomb F.16, loci 5 and 6, eight Type IIa bangles were found; yet this is a common, simple bangle. Four glass bangles (748, 759, 760, 761) were found in Early Roman period Tomb 4, but they represent all three styles (plain, ribbed, and twisted), and these styles continue throughout all periods. The two bone bangles (Objects 725, 754; fig. 13.11:8-9) found in the same locus of Early Roman-period Tomb 6 were probably Type Ia infant bangles. In general, more infant and child bangles were found in Roman and Byzantine-period contexts, but this may reflect the accidents of finds.

Parallels

The two simplest forms of bangles (Types Ia and IIa) are among the most ancient types of jewelry in the Near East and found at least by the Iron Age (Platt 1974: 3) if not earlier.

Type Ia: plain bangles similar to Object 1178 have been found in a Roman tomb at es-Salt dated 3rd-4th centuries A.D. (Hadidi 1979: 136, no. 28), and in the cemetery at Karm al-Shaikh, Jerusalem (Baramki 1932: pls. 5.16; 6.10, 14; 11.4; 14.5 and 25.2-3). A child-size bangle (M 1486) from Tomb 6 at Tell en-Naṣbeh (McCown 1947: pl. 112.11) also seems to be similar. Several glass Type Ib: ribbed bangles (Objects 547 [fig. 13.12:1], 761, 1000 and 1177) are also parallel to some bangles (M1485, 14889, 1737) from Tomb 6 at Tell en-Naṣbeh (McCown 1947: pl. 112.13-15). In addition, Object 1177 is similar to bangles at es-Salt (Hadidi 1979: pl. 58.29) and at Grave 15 and Cave B from Karm al-Shaikh, Jerusalem (Baramki 1932: pls. 6.13 and 12.3). Type Ic: twisted bangles (Objects 748, 2361, and 2391; fig. 13:12:2-3) also have parallels (M1736, 1738) from Tombs 18 and 27 at Tell en-Naṣbeh (McCown 1947: pl. 112.12, 16).

Objects 1379, 1551, 2425 (fig. 13.12:4), 2853 from Byzantine-period tombs at Hesban are Type IIa bangles that compare well with some form Jabal Jofeh el-Sharqi in Amman (Bisheh 1972: pl. 5; fig. 2). Type IIb bangles have had a long history in the ancient world. It is likely that the main function of the finials was to depict animal heads. Coils of wire extended from the neck of each head, and could continue to be wound around the entire length of the bangle. On less elaborate specimens, especially in metals other than gold or silver, the finials would probably bear minimal resemblance to the basic shape of the animal head and the coils were simply engraved striations. Higgins (1961: 187) presents elaborate snake-head motifs dating to the Hellenistic and Roman periods. Snake heads are also reflected on bangle (C 210) from Samaria dated

Figure 13.3 Type Ia Bangles.

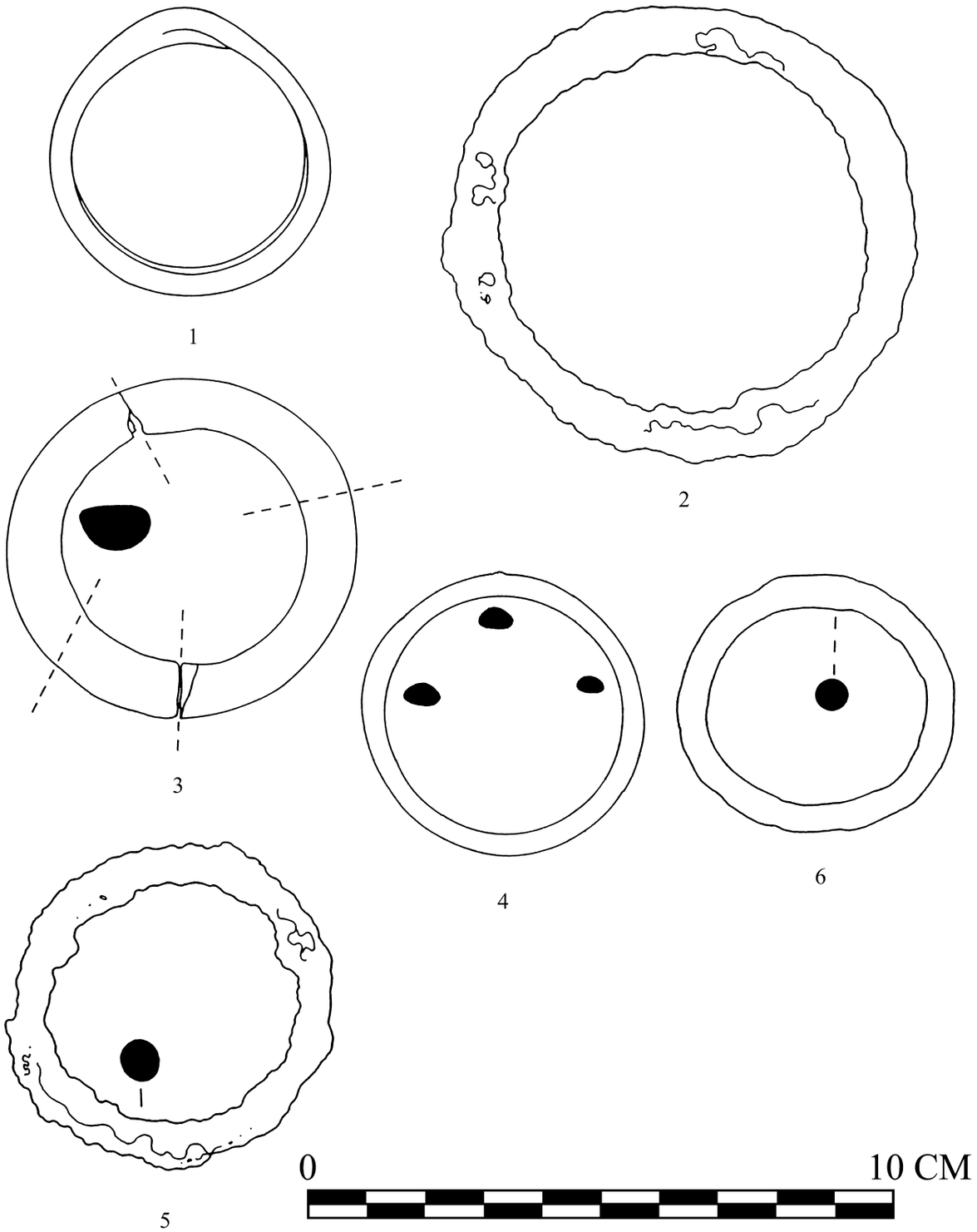
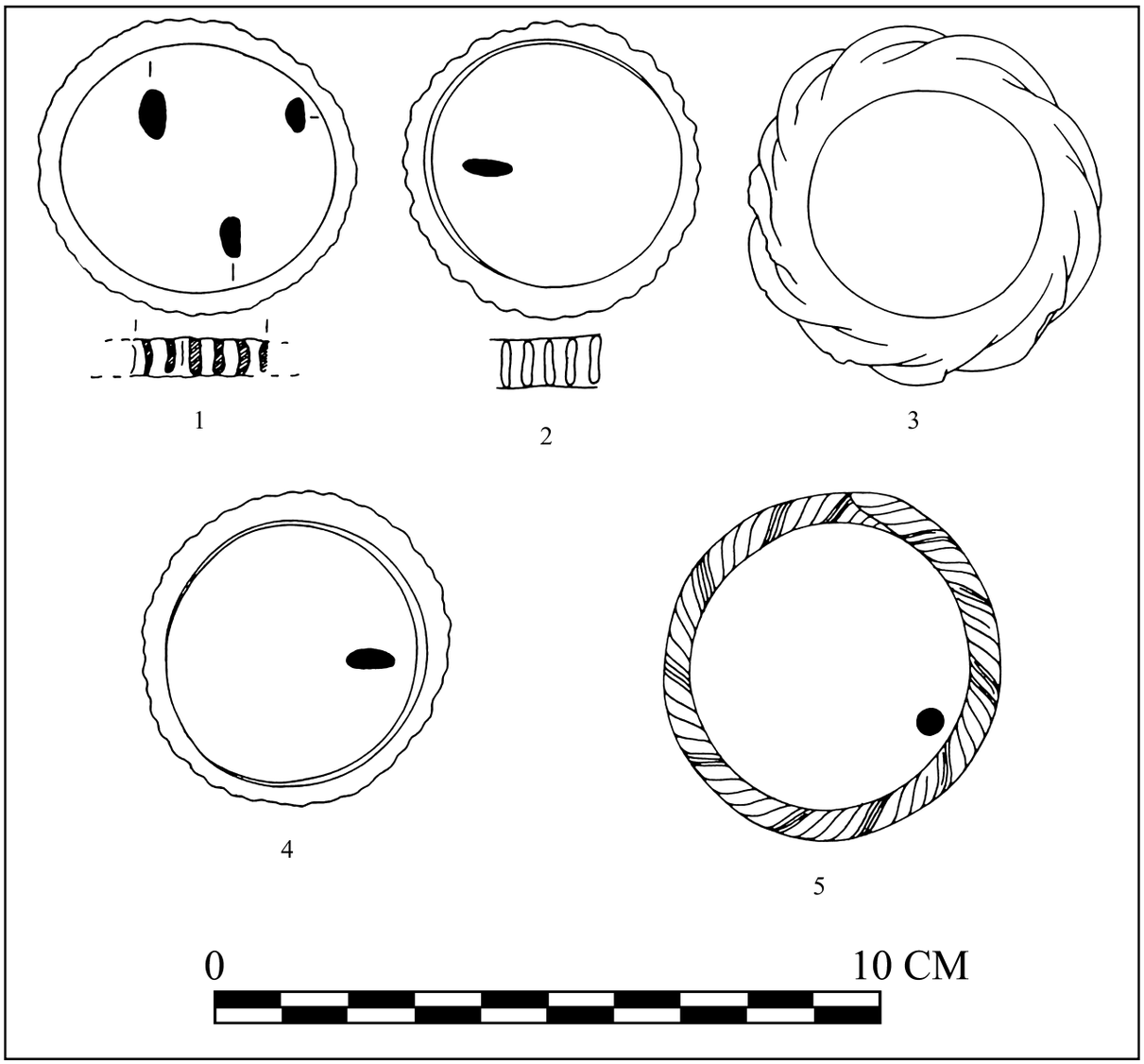


Figure 13.4 Types Ib and Ic Bangles.



to the Iron Age (Crowfoot, Crowfoot and Kenyon 1957: 446-47, fig. 106.2). At Gezer (Macalister 1912: pls. 113.7, 116.8 and 135.33) several bangles with various-shaped finials are parallel to bangles at Hesban including Objects 604 (fig. 13.12:5), 1360 (fig. 13.12:6), 1397, and 1835.

There are a number Type IIc bangles from Hesban. Petrie (1927: 8) discusses a gold bangle (pl. 2.27) of this type where the ends are crossed and coiled around the base with about eight twists on either side. The purpose of this fastener is to allow the ends to slide open as far as possible for passing the hand through. This greatly aids the understanding of this type of fastener. The sliding mechanism would not be obvious on the Hesban bangles because corrosion has sealed the moveable parts. A bangle from Tomb 198 at Gezer (Macalister 1912: pl. 128.1) compares with Objects 592 and 2539. Another parallel to Object 2539 is from Dura-Europas (Johnson 1931: 78; pl. 46.1; cf. MacKay 1949: 171), as is a bangle from Tomb XV at Hanita (Barag 1978: fig. 18.108). In a number of

Figure 13.5 Type IIa Bangles.

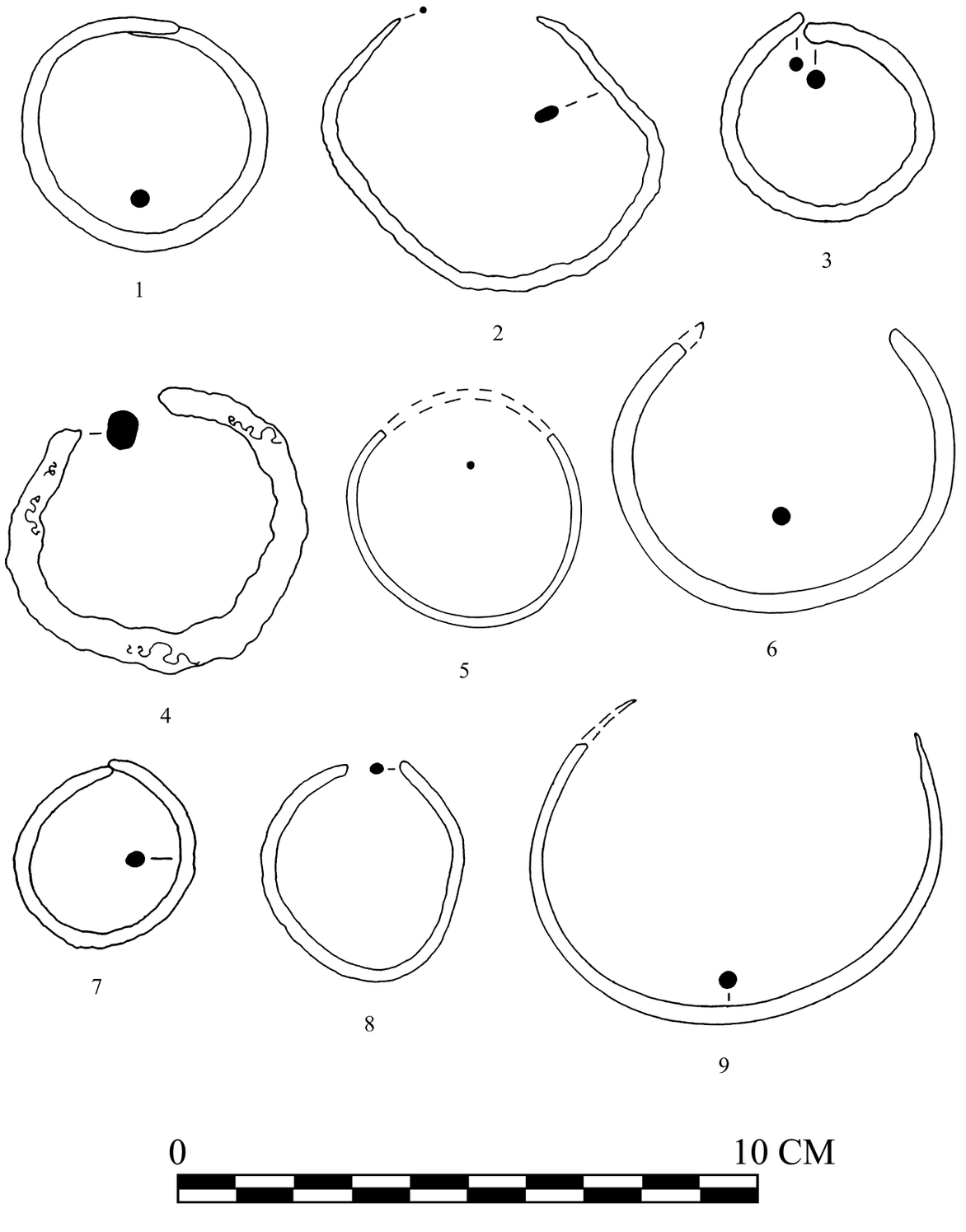


Figure 13.6 Type IIa Bangles.

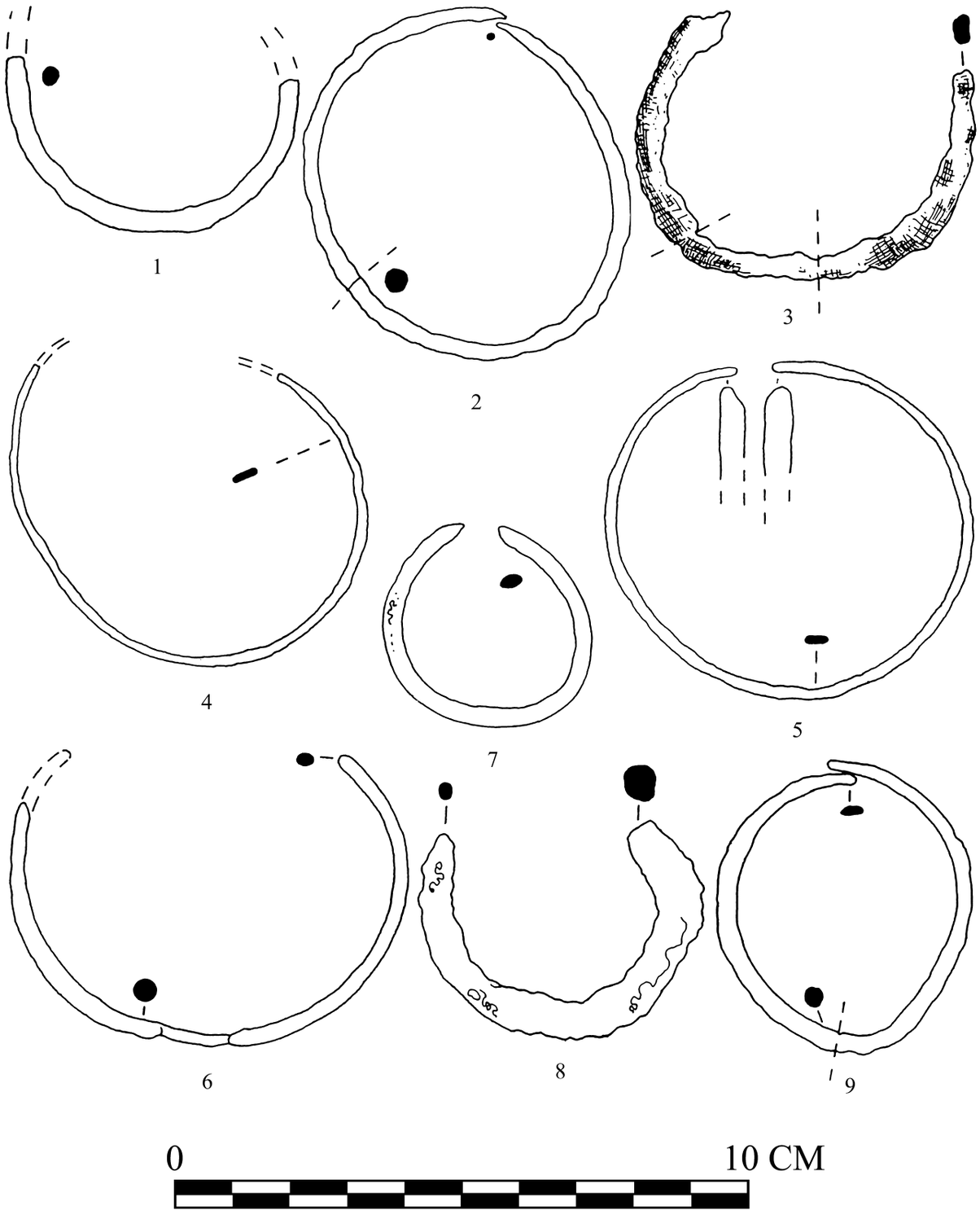


Figure 13.7 Type IIb Bangles.

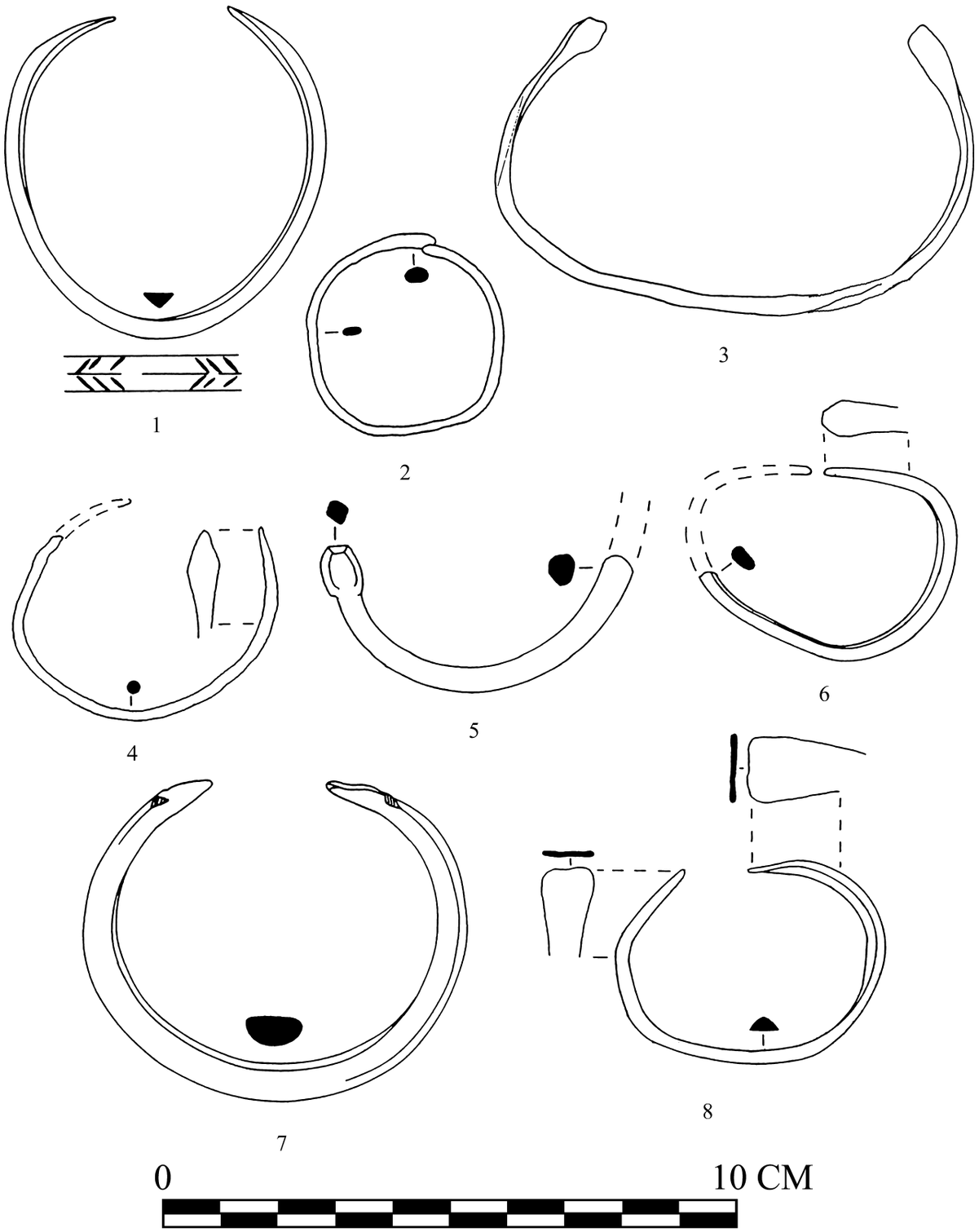
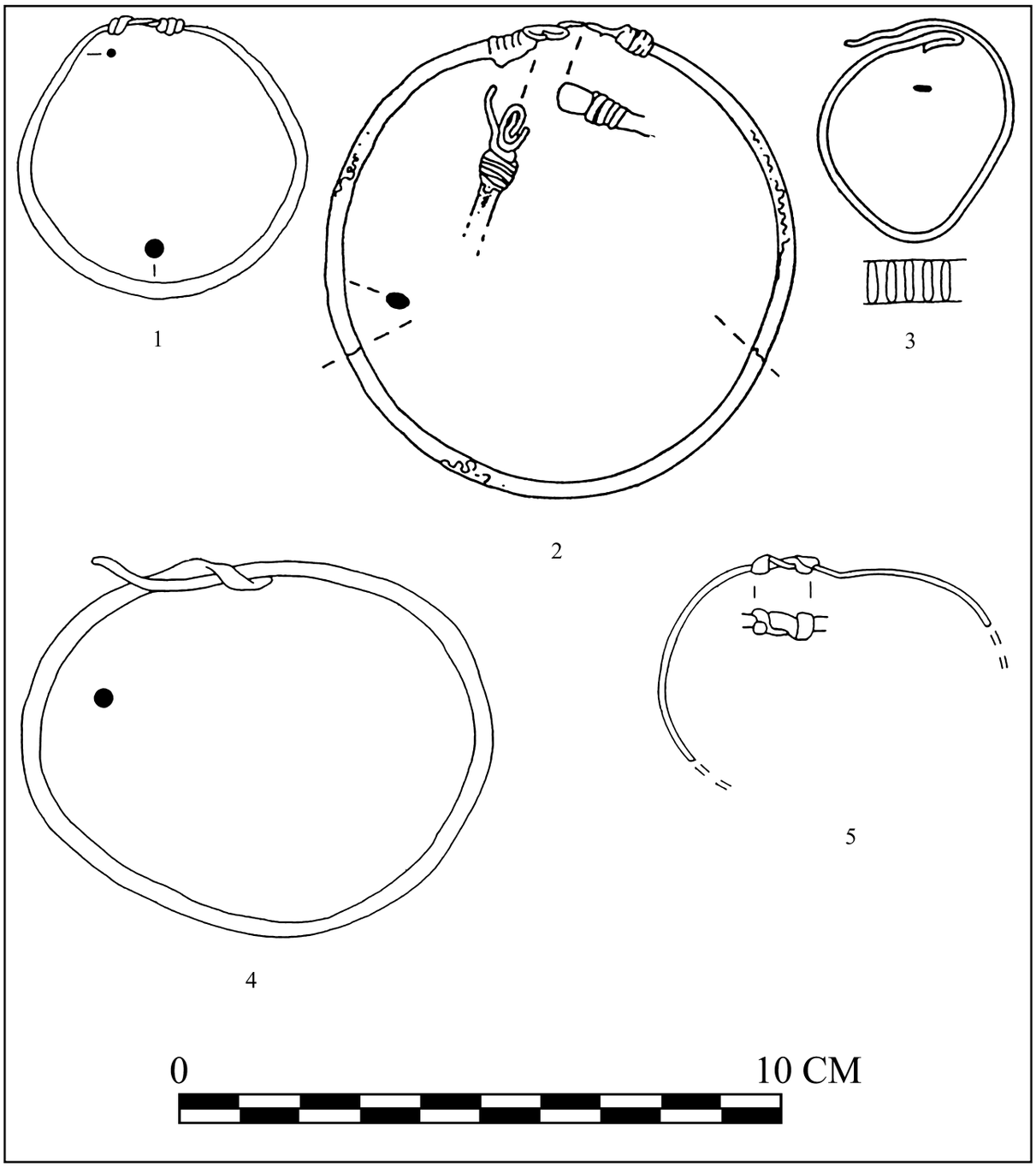
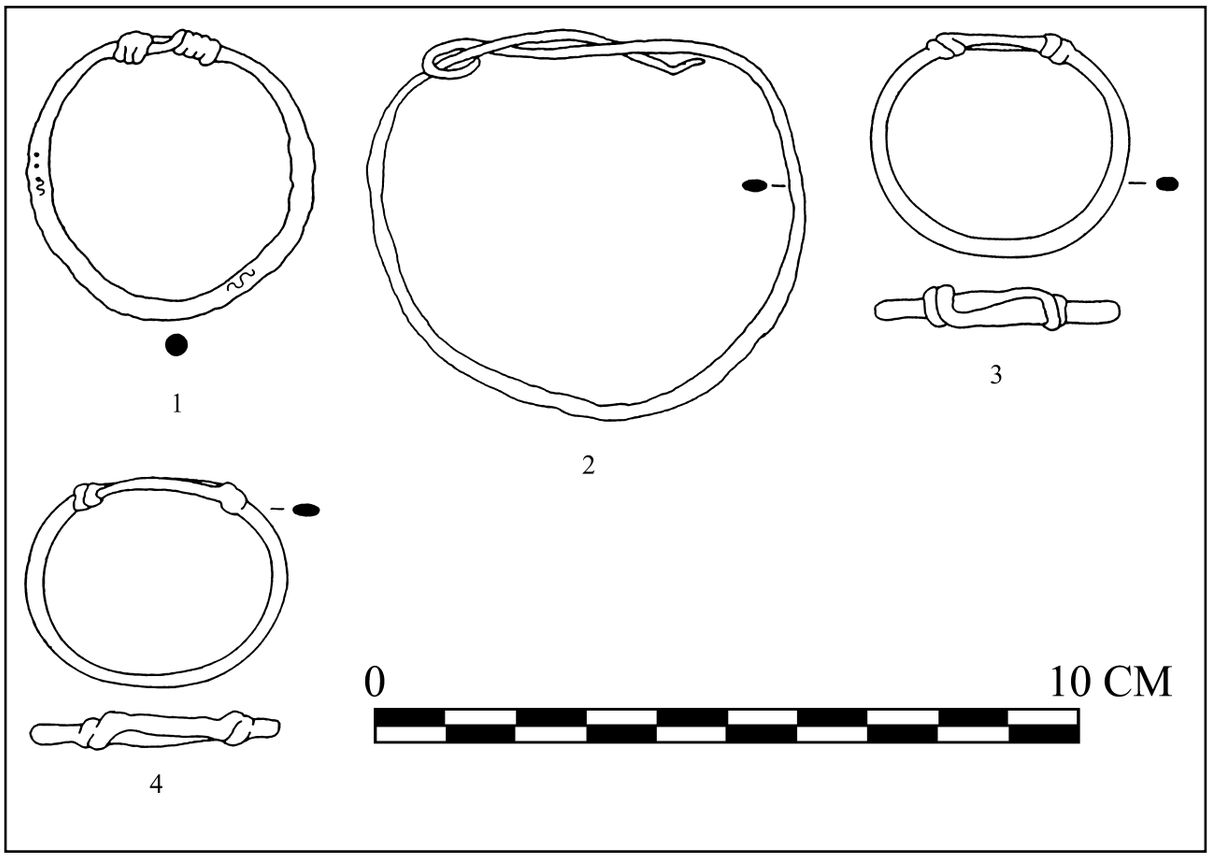


Figure 13.8 Type IIc Bangles.



bangles (Objects 667, 1069 and 2693) the twisted fastener appears to have come undone. One wonders if this is just another way of removing the object from the body? Parallels to these bangles are found from Tomb 155 at Gezer (Macalister 1912: pl. 113.15); and Megiddo (Guy and Engberg 1938;

Figure 13.9 Type IIc Bangles.



pl. 133.21, fig. 179:3), although these bangles date much earlier (Middle or Late Bronze II) than those at Hesban.

Objects 690, 714, 1221, 2447 and 2496 are Type IId bangles that are comparable with objects at Samaria (Crowfoot, Crowfoot and Kenyon 1957: fig. 105:10) and in the Hélène Stathatos collection in Athens (Amandry 1971: pl. 18). Bangle 2447 is also similar to Object J12936 from the tomb at Jabal Jofeh el-Sharqi, Amman (Bisheh 1972: pl. 4, fig. 2) which dates 3rd or early 4th century A.D. Object 2496 can be compared to one from Graves 3 and 35 from Karm al-Shaikh, Jerusalem (Baramki 1932: pls. 7.17 and 11.1).

Rings

Rings are round objects with a hollow center. Their outer diameter commonly ranges from ca. 1.5 to 3.0 cm, with an inner diameter of 1.0 to 2.0 cm. Not all of the rings presented below are finger jewelry. Some probably served as hardware or were decoration for other objects, such as earrings with a ring pendant.

Iron Rings

The iron rings (Table 13.3) from Hesban can be classified by their shape, which includes plain round and two-ended varieties. Those rings which deviate from these basic types can be said to have an unusual design.

Plain Round

The corrosion characteristic of ancient iron renders measurements difficult and original size nearly impossible to discern accurately. Nevertheless, among the 19 plain round iron rings found at Hesban, ten of them have a relatively larger outside

Figure 13.10 Type IId Bangles.

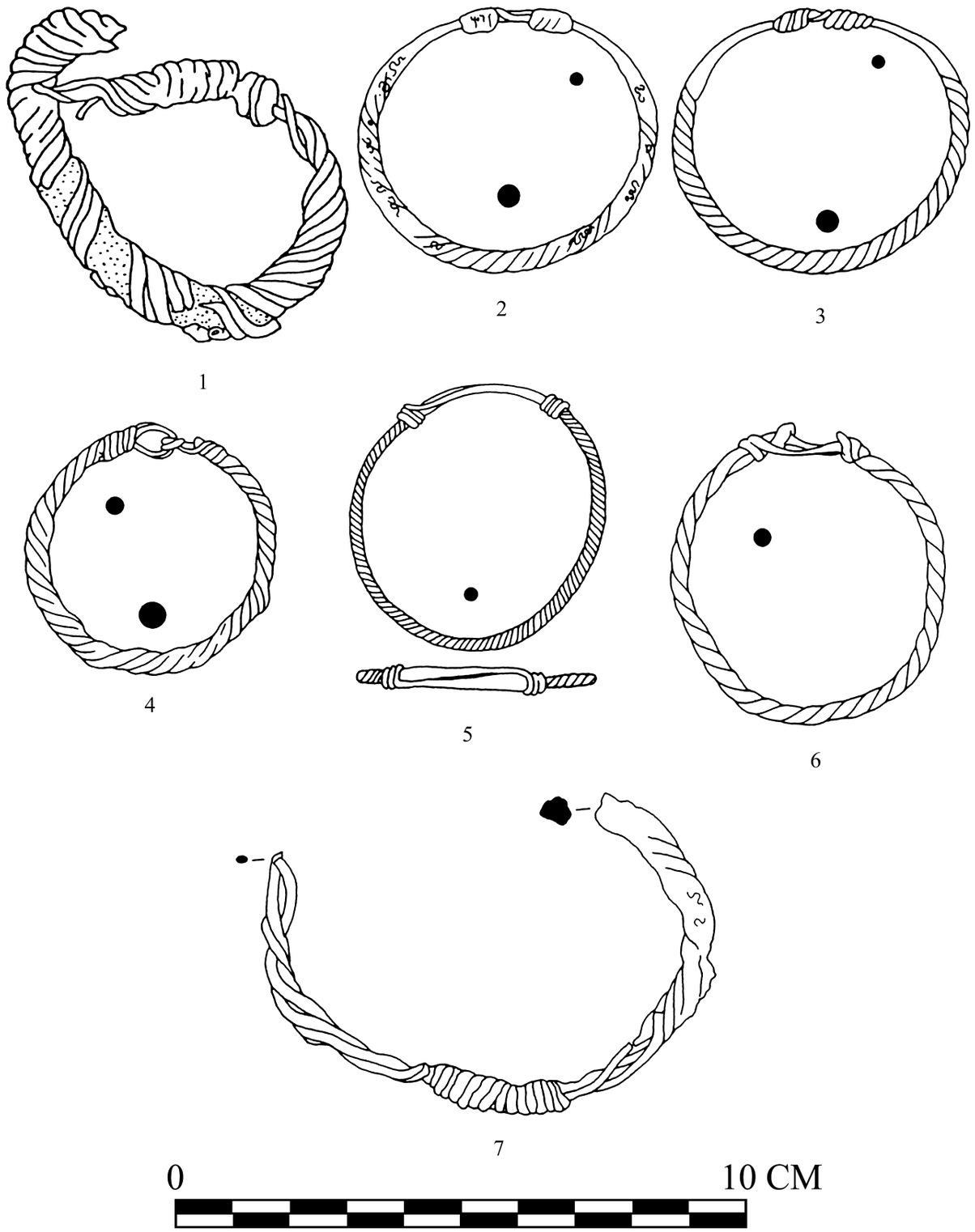


Figure 13.11 Types IIe and III Bangles.

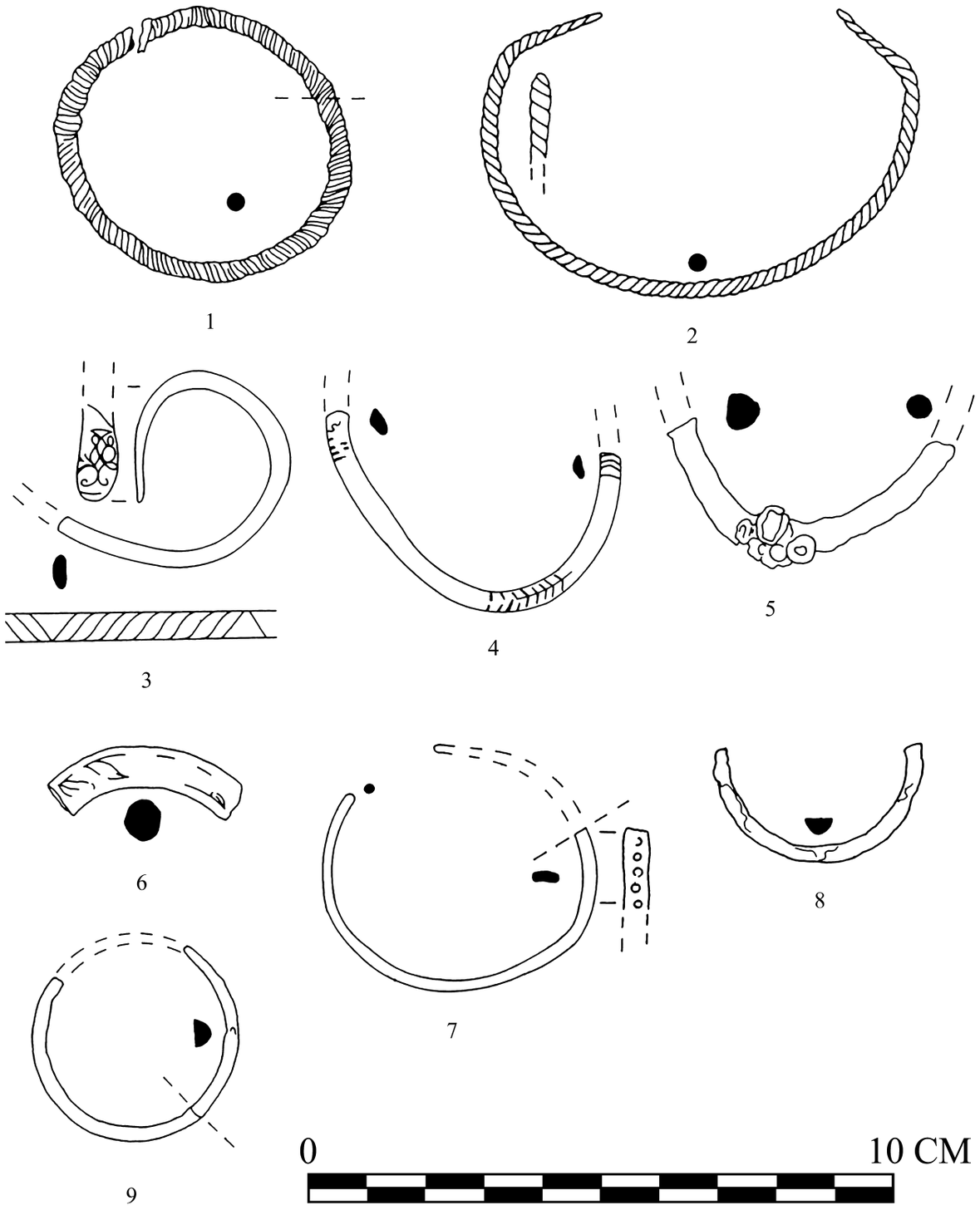
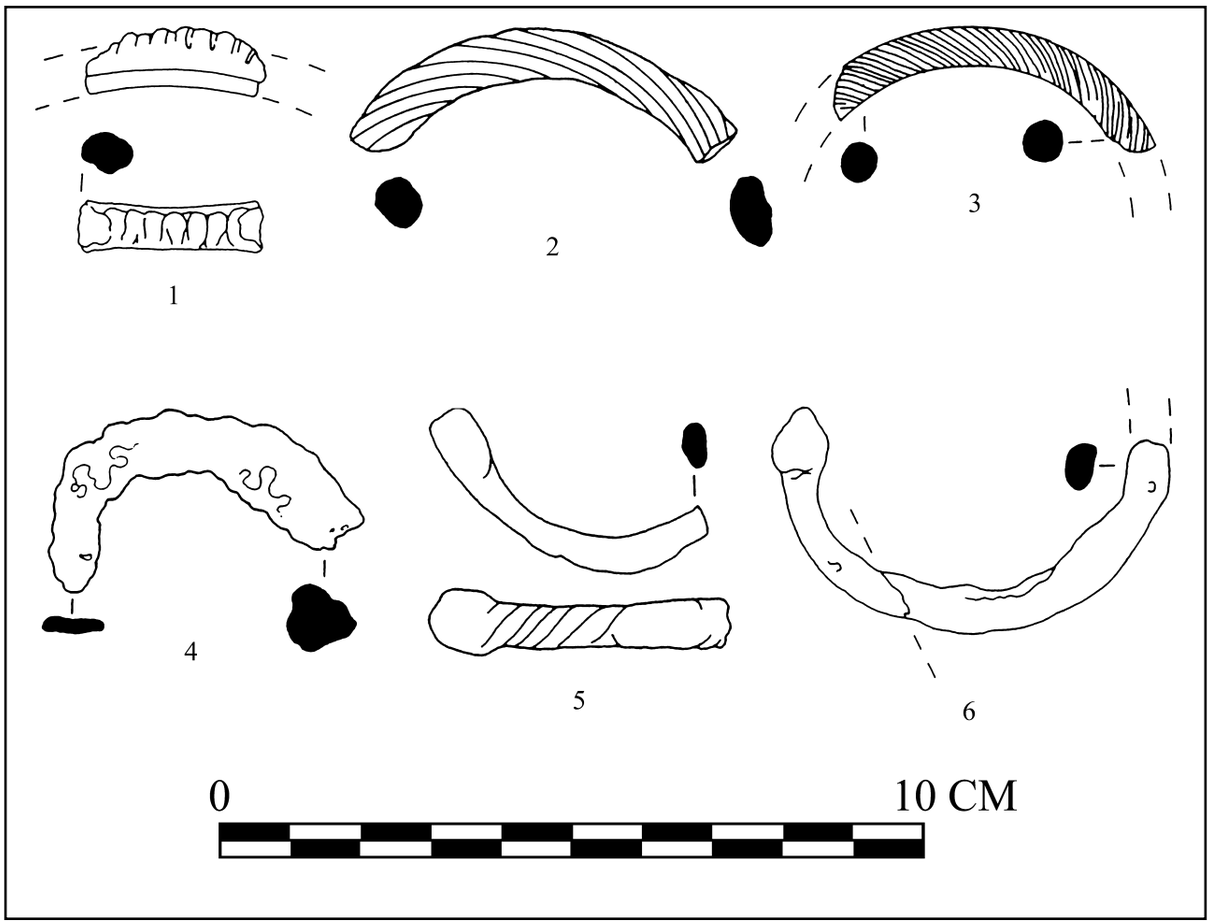


Figure 13.12 Bangle Fragments.



diameter (ranging from 2.69 to 4.17 cm) than others of this type. Objects 171, 304 and 2898 (fig. 13.13:1-3) are representative examples. The inner diameter of these rings can be as large as 2.09 cm. The thickness of the corroded metal ranges from 0.5 to just over 1.0 cm. It is probable that some of these thicker rings were not finger jewelry, as they would have been bulky and heavy to wear. Several of these large plain rings were found in Late Islamic-period strata.

The outer diameter of the smaller rings of this type (Objects 160, 344, 1931, 2538, 2617, 2753, 2776, 2854 and 2899; fig. 13.13:4-12) range from 1.58 to 2.29 cm. The thickness of the metal ranges from 0.25 cm to 0.63 cm, with the inner diameter averaging about 1.1 cm. This is the size of classic finger rings.

Two Ends

Six iron rings (Objects 656, 781, 925, 1195, 1770 and 1979; fig. 13.13:13-18) and three fragments (Objects 902, 2905, 2906) belong to the two-ended type. Their outer diameter ranges from 2.29 to 4.8 cm, with an inner diameter averaging between 1.5 and 2.5 cm. Three of these rings (Objects 781, 1770, 1979) appear to be flattened in such a way that if worn, would be standing away from the finger. In light of this feature, along with the rather large diameter of one of them (Object 1770), they would have been awkward and uncomfortable for the wearer. Hence, their use as finger jewelry can be questioned. The large (3.61 cm diameter) of Object 1195, along with its squared-off hoop, would suggest that it may not have functioned as a finger ring either.

Table 13.3 Iron Rings.

Object No.	Locus	Stratum	Type	Outer Diameter
160	C.3:1	2	small plain round	2.2
170	A.4:5	?	unusual design	2.75
171	D.3:9	3	large plain round	2.69
304	C.3:7	6	large plain round	4.14
344	B.4:1	2	small plain round	1.58
656	C.4:51	6	two ends	3.1
683	F.6:2	—	unusual design	2.0
747	F.4:5	—	unusual design	2.35
781	B.4:16	3	two ends	2.89
844	D.5:5A	3	large plain round	3.32
845	D.5:5A	3	large plain round	2.84
868	C.5:3	?	unusual design	3.1
871	F.10:1	—	unusual design	2.08
874	F.9:2	—	unusual design	2.2
902	D.5:5F	3	two ends	3.15
925	D.6:33B	3	two ends	3.1
1059	F.1:2	—	unusual design	2.0
1195	D.6:33I	4	two ends	3.61
1196	D.6:33I	4	unusual design	3.1
1212	F.5:4	—	unusual design	2.34
1321	B.4:82	cleanup	unusual design	4.25
1770	C.6:10	1-4	two ends	4.8
1842	C.6:14	3	large plain round	3.02
1931	C.8:1	2	small plain round	1.86
1978	D.4:64	11	unusual design	3.2
1979	C.6:23	3	two ends	2.29
2052	A.9:7	1-2	large plain round	3.25
2208	C.5:84	?	large plain round	3.17
2538	F.30:3	—	small plain round	2.29
2617	G.4:43	—	small plain round	2.26
2639	F.38:2	—	large plain round	3.16
2657	G.4:51	—	large plain round	4.17
2753	C.6:77	3	small plain round	1.92
2776	C.9:37	2	small plain round	2.19
2854	F.38:12	—	small plain round	2.03
2898	G.13:9A	—	large plain round	2.93
2899	C.9:46	3	small plain round	2.13
2904a	F.38:3	—	unusual design	2.41
2904b	F.38:3	—	unusual design	2.3
2904c	F.38:3	—	unusual design	—
2905a	F.38:12	—	unusual design	2.2
2905b	F.38:12	—	two ends	2.31
2906	F.38:11	—	two ends	1.6

Unusual Designs

Those iron rings which do not fit within the above types include two stirrup-shaped rings (Objects 747 and 1212; fig. 13.14:1-2). This shape was a very popular design for signet rings. Several rings (Objects 683, 874, 1978, 2904b and 2905; fig. 13.14:3-7) have oval bezels. Bezels could be carved from silver, gold, or semiprecious gems, such as onyx and sardonyx, with intaglio carvings to make seals (*Jewellery Through 7,000 Years* 1976). Object 874 is a relatively delicate ring whose bezel is a projecting piece of metal perhaps representing a flower or geometric shape. There is also at least one ring (Object 1196; fig. 13.14:8) with a double-pointed design. Its horn-like points may have held a stone or ornament. Object 170 has a squared shape. It is probably not a finger ring and its lack of corrosion may indicate that it is a modern piece of hardware.

Parallels

Parallels to Objects 747, 1059, 1212, 2904, 2905 can be found in Tombs 102, 107, and 113 at the Cellarka cemetery at Salamis, in Cyprus (Karageorghis 1970: pls. 251.10; 258.32 and 260.72). These objects can also be compared with Objects a 100 and a 247 at Alishar Hüyük, in Turkey (Schmidt 1933: 108-9, fig. 170).

Bronze Rings

Like their iron counterparts, bronze rings (Table 13.4) are classified here by their shape; including the plain round, and two-ended types as well as those with unusual designs.

Plain Round

There are 19 plain round bronze rings including Objects 49, 73, 403, 415, 751, 875, 891, 958, 971, 1548, 1678, 2288, 2810, 2863, and 2903a (fig. 13.15:1-15). Most of these rings consist of flattened bands of metal whose widths range from 0.1 to 0.4 cm, but generally are between 0.2 and 0.3 cm thick. Object 415 is a very small ring with an inner diameter of only 0.78 cm with its wire measuring 0.15 cm thick. Either it is a small child's finger ring or an earring pendant. Object 2288 is a plain bronze ring made from a piece of wire, 0.2 cm thick, with its ends overlapped to form a solid piece. At the point of overlap there is a slight enlargement that may have been purposely ovoid in shape.

Figure 13.13 Iron Rings.

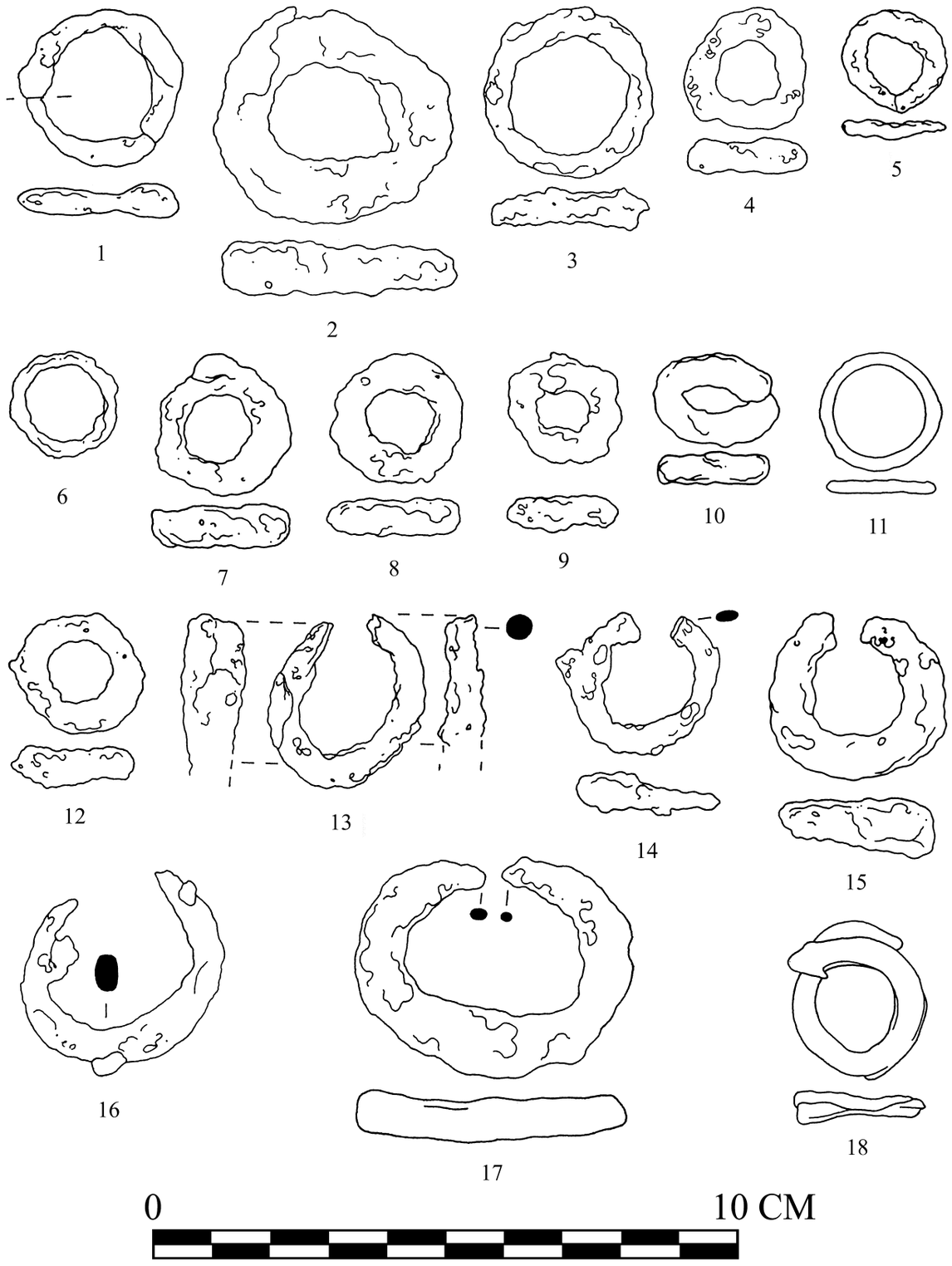
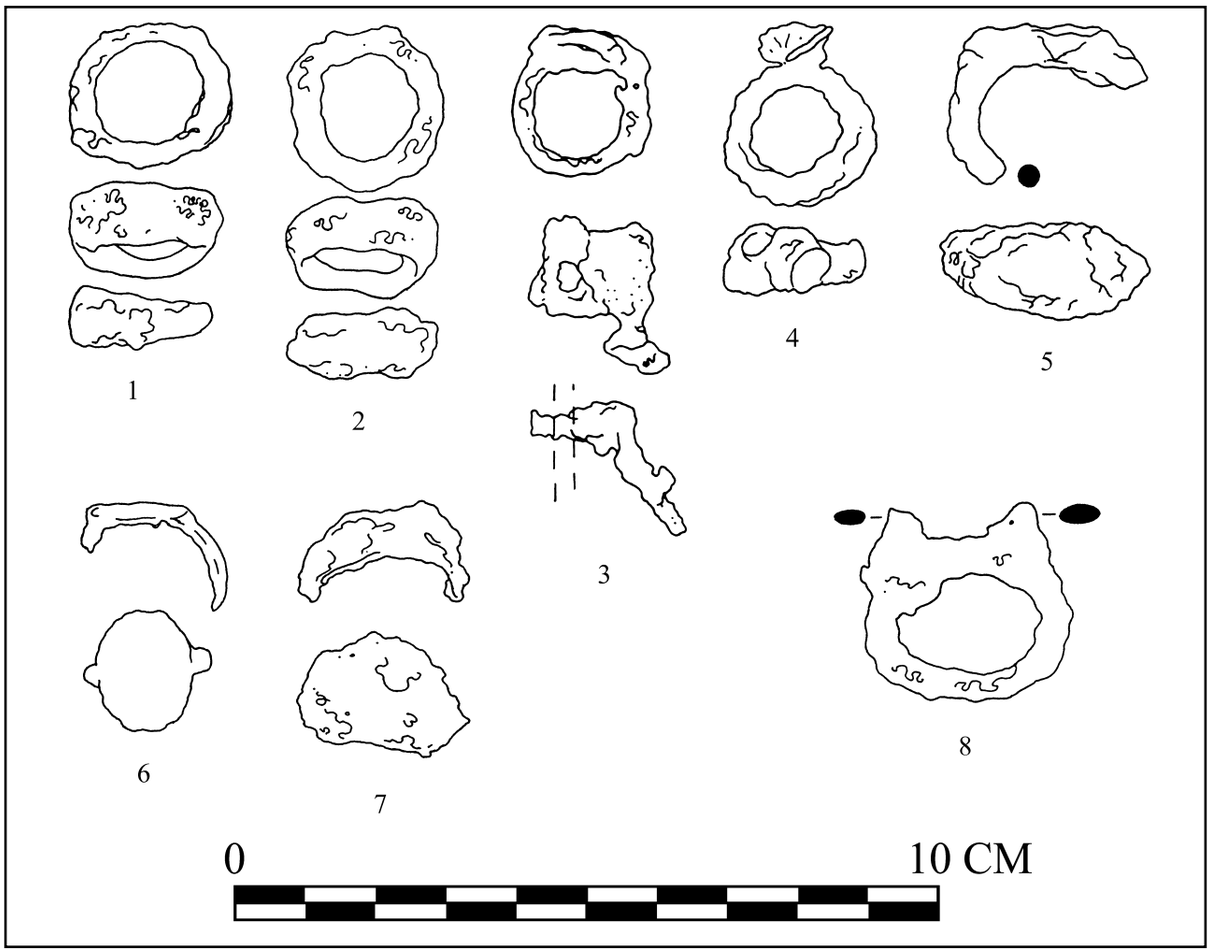


Figure 13.14 Iron Rings.



Two Ends

Several bronze rings (Objects 986, 1720, 2286, 2287, 2385 and 2714; fig. 13.15:16-21) have overlapped ends. At least three rings (Objects 1720, 2286, 2385) of this type could have been used as weights for trade or monetary exchange. Other rings (Objects 215, 1173, 1181, 1549, 1771, 2362, 2465, 2616 and 2793; figs.13.15:22-25 and 13.16:1-5) meet or have a separation, sometimes due to their broken condition. The bands are usually slightly flattened against the finger, although four (Objects 986, 2287, 2465, 2714) are flattened on the other sides as well. One example, Object 2362 (fig. 13.16:2), exhibits a ridge on the outer edge of the band. One end of this same ring is flattened and shaped so that it directly meets the smaller end.

Because of its large size, Object 1173 (fig. 13.15:23), its outer diameter measuring 3.25 cm with ends separated by a space of 0.3 cm, may not be a finger ring either. Compare the smallest bangle from Hesban which is 3.4 cm. Object 1181 (fig. 13.15:24) has one end which appears graduated, possibly suggesting a earring. Parallels to bronze rings with two ends can be found at Alishar Hüyük. (Schmidt 1932: 157; fig. 199).

Unusual Designs

Bronze rings with unusual designs include Objects 16, 17, 18, 282, 297, 715, 771, 779, 801, 933, 1200, 1220, 1554, 1597, 1748, 1759, 2206, 2453, 2535, and 2801 (fig 13.16:6-25). Object 16 (fig. 13.16:6) is a bronze ring, now in two frag-

Table 13.4 Bronze Rings.

Object No.	Locus	Stratum	Type	Outer Diameter	Inner Diameter
7	C.1:1	2	fragments	2.7	2.3
16	C.2:1	2	unusual design	1.7	6 1.4
17	B.1:1	1-2	unusual design	1.9	1.57
18	C.1:1	2	unusual design	2.1	1.88
49	C.1:4	3	plain round	2.1	1.85
73	C.2:3	2	plain round	2.21	1.88
215	D.1:11	3	two ends	2.23	1.53
282	C.3:6	3-4	unusual design	1.8	1.3
286	B.1:17	14	two ends	2.24	1.66
297	C.4:7	3	unusual design	1.5	1.29
403	C.4:25	3	plain round	2.59	2.0
415	B.4:1	2	plain round	1.15	.78
434	A.1:17	8	fragments	1.8	1.4
715	F.6:12	—	unusual design	1.9	1.36
751	F.4:6	—	plain round	1.95	1.7
771	B.3:12	9	unusual design	1.9	1.2
779	B.4:15	13	unusual design	1.95	1.56
801	D.6:34	3	unusual design	2.2	1.87
875	B.2:27	11	plain round	2.75	2.12
891	C.5:4	3	plain round	2.4	1.93
933	D.6:33C	3-4	unusual design	2.22	1.69
958	F.1:1C	—	plain round	1.6	1.27
963	F.8:8	—	two ends	1.51	.91
971	A.1:58	4	plain round	1.86	1.62
986	D.6:33E	3	two ends	1.41	.97
1173	F.10:6	—	two ends	3.25	2.76
1181	F.10:4	—	two ends	1.58	1.45
1200	F.1:5	—	unusual design	2.5	1.96
1213	F.5:4	—	two ends	1.43	1.0
1215	F.5:4	—	fragments	3.19	2.78
1220	F.1:7	—	unusual design	1.99	1.65
1548	A.7:61	3	plain round	1.52	.9
1549	D.3:26	8	two ends	2.2	1.63
1554	F.18:3	—	unusual design	1.85	1.43
1597	F.18:8	—	unusual design	1.72	1.46
1678	A.7:E Balk	3 ?	plain round	2.02	1.45
1720	C.6:14	3	two ends	2.5	1.8
1748	A.9:19	2	unusual design	2.7	2.3
1759	B.7:3	2	unusual design	1.61	1.45
1771	C.6:11	2	two ends	2.14	.83
1865	G.6:3	—	plain round	2.0	1.75
2086	C.7:39	3	two ends	1.84	1.39
2203	D.4:84	—	fragments	4.0	2.23
2206	C.5:85	—	unusual design	1.49	1.3
2247	C.8:17	3	fragments	3.5	—
2286	C.8:11	2	two ends	2.5	1.93
2287	A.11:26	3	two ends	2.1	1.75
2288	A.8:20	?	plain round	1.68	1.32
2362	C.6:44	3	two ends	2.75	2.3
2385	C.1:123B	17	two ends	2.9	2.08
2453	C.6:45	3	unusual design	2.31	1.9

Table 13.4, *continued.* Bronze Rings.

Object No.	Locus	Stratum	Type	Outer Diameter	Inner Diameter
2465	C.5:113	3	two ends	2.03	1.75
2516	F.31:8	—	plain round	1.8	1.36
2535	F.31:8	—	unusual design	ca. 2.0	—
2561	C.7:61	6	plain round	2.26	1.74
2616	G.14:8	—	two ends	1.92	1.43
2620	G.13:16	—	unusual design	1.49	1.2
2636	C.4:49	6	fragments	1.75	1.9
2647	C.9:14	2	unusual design	2.03	1.78
2713	G.14:10	—	unusual design	2.0	1.62
2714	C.9:29	3	two ends	1.56	1.30
2790	F.38:3	—	fragments	2.4	2.05
2793	F.31:22	—	two ends	1.98	1.67
2801	F.38:3	—	unusual design	2.1	1.85
2810	F.38:3	—	plain round	1.57	1.42
2863	G.14:39	—	plain round	2.23	1.80
2903a	F.38:3	—	plain round	1.85	1.5
2903b	F.38:3	—	plain round	1.56	1.77
2907	F.37:22	—	fragments	2.0	1.6
2919	F.37:6	—	two ends	2.27	1.87

ments. The bezel has broken edges, but may have once held a flat precious stone between its two triangles. The height of the stone would appear to have been 0.9 cm, with a width of 1.1 cm. Object 17 (fig. 13.16:7) is a flat-banded bronze ring, 0.6 cm wide. One end is hammered into a thinner piece of metal, ca. 1.2 cm wide. This end is crafted into two lobes with a split between them. The other end reaches down between the two lobes into the split where it appears to be "latched." The lobes are decorated with diagonal hatching, forming arrows or a large "X." The larger end has a diagonal motif with four plain lines. The smaller end has hatching to make a large "X," and three straight lines are superimposed on top.

Object 297 (fig. 13.16:10) has a projection which may have been part of a small bezel. Around the outer band is a regular series of loops with concave centers, a guilloche-type design. Two small projections in the bezel area of Object 715 (fig. 13.16:11) suggest a piece of metal foil, now broken off, which held a decoration. It was found in an important locus with gold earrings, silver bangles, a bronze mirror and several beads. Object 771 (fig. 13.16:12) is probably not a piece of finger jewelry. Its shape is basically square with a scallop at each corner, and a circle, 1.2 cm in diameter, cut out of the center. The piece is flat with the smallest edge projecting away from the finger, which would have made it awkward to wear. Possibly it could have been an earring pendant. The bezel of Object 779 (fig. 13.16:13) appears to be made from an enlarged, overlapped end of the artifact. Its double-lobed effect here resembles Object 17. It is possible to discern engraved lines.

Objects 801, 933, and 1200 (fig. 13.16:14-16) are stirrup-shaped rings. An Arabic inscription is carved on the bezel of Object 933. Object 1200 is a classic bronze signet ring. It was found on the first phalange of a finger bone. The slender base graduates from 0.33 to 1.16 cm on either side of the signet area. Signet rings were characteristically worn by Roman consuls by the end of the third century A.D. At the Byzantine Imperial Court, in Constantinople, the fashion continued (*Jewellery Through 7,000 Years* 1976). The flat band of signet ring (Object 2535; fig. 13.16:24) broadens near the bezel to hold an oval stone, 0.9 cm wide. The translucent nature of the brownish-yellow stone (carnelian?) is enhanced by its lack of metal backing. A nude human figure with outstretched arms, holding a bow in one hand and arrows(?) in the other, is engraved into the stone. A seal impression is easily made from this intaglio. This object can be

Figure 13.15 Bronze Rings.

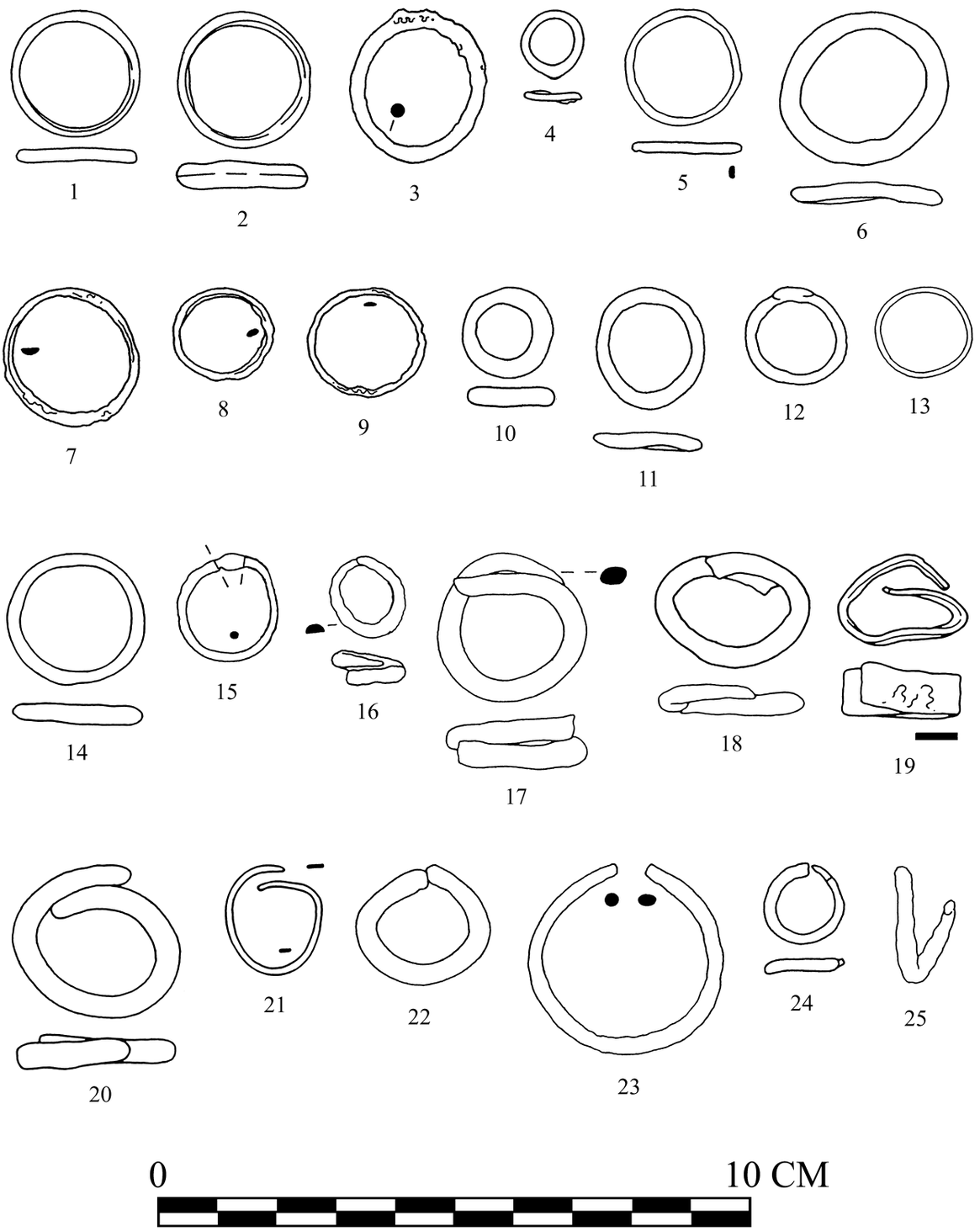


Table 13.5 Miscellaneous Rings.

Object No.	Locus	Stratum	Material	Outer Diameter	Inner Diameter
61	C.1:4	3	ivory	5.2	3.05
72	C.1:5	3	lead	1.45	1.13
165	C.1:6	3	ivory	5.5	3.4
386	D.1:41	8	shell	1.8	1.1
682	F.6:2	—	bone	2.37	1.86
928	D.6:33D	—	clay	2.01	.9
929	D.6:33D	3	ivory	5.15	2.4
997	F.1:2	—	silver	2.37	1.6
1189	C.6:5	2	glass	2.11	1.63
1214	F.5:4	—	amber	—	1.4
2331	C.6:28	3	glass	1.58	.96
2339	C.5:94	3	ivory	4.65	2.35
2609	C.8:31	2	silver	1.7	1.4

compared with a silver signet ring set with a red glass gem and carved with a head in profile from Tomb XV at Hanita, dated to the third-fourth century A.D. (Barag 1978: 43; fig. 18.103) and a bronze signet ring set in a hollow mount with a carved carnelian bezel depicting an owl flanked by two standing deities from a Roman tomb dated from the third to fourth centuries A.D. at Es-Salt (Hadidi 1979: 136, pl. 54).

The distinctive feature of Object 1220 (fig. 13.16:17) is the rectangular raised portion that appears to be the bezel. It has a flat band 0.35 cm wide. Object 1554 (fig. 13.16:18) is a bronze ring with a basic hoop that has been covered with a fine coiled wire that at one point forms a bead-like effect.

Object 1597 (fig. 13.16:19) is a delicate ring with a 0.27 cm slender flat band. Near the bezel the band suddenly expands for the setting of a stone, 0.6 cm in diameter. The "grayish-green" (5G5/2) glass stone has a convex shape with a flat under portion affixed to the ring. Two similar bronze ring fragments were found in a Hellenistic or Roman period hoard at Alishar Hüyük (Schmidt 1933: 98; fig. 152, b 766).

Object 1748 (fig. 13.16:20) was found on a finger bone of a female skeleton and displays a *cloison* setting for a rectangular stone, which is a smoothly polished carnelian, measuring 1.82 by 2.43 cm and is 0.51 cm thick. The most distinctive feature of Object 1759 (fig. 13.16:21) is its high setting, bent and protruding 0.45 cm around the top of the ring for holding a stone. A piece of metal, on which the stone would rest, is missing. The ring is crafted from one piece of metal. The rounded base wire, 0.2 cm thick, is flattened out to 0.6 cm in the bezel area. Object 2206 (fig. 13.16:22) is a delicate ring with a band 0.2 cm wide. Its two overlapped ends are flattened and thus slightly wider and thinner than the band. Around the band is a series of stamped loops with deeply indented centers.

Object 2453 (fig. 13.16:23) has a silver Mamluk coin superimposed on the bezel, measuring 1.25 by 1.3 cm. The band of Object 2801 (fig. 13.16:25) is octagonal. Its most important feature is the cross on the bezel. The shape is much like the one considered to be "maltese," at least by the time of the Crusades. A parallel somewhat reminiscent of Object 2801 is a bezel on a bronze ring that has a cross with an oval in each quadrant between the arms from Tomb 7 at Pella (Smith 1973: 219; pl. 68.346).

Miscellaneous Rings

A number of rings were made out of materials other than bronze and iron. These include rings made of bone, ivory, clay, shell, amber, glass, lead and silver (Table 13.5).

Bone Ring

Object 682 (fig 13.17:1) is a bone ring that is evenly crafted into an almost perfect circle. Its flat inner band measures 0.4 cm.

Figure 13.16 Bronze Rings

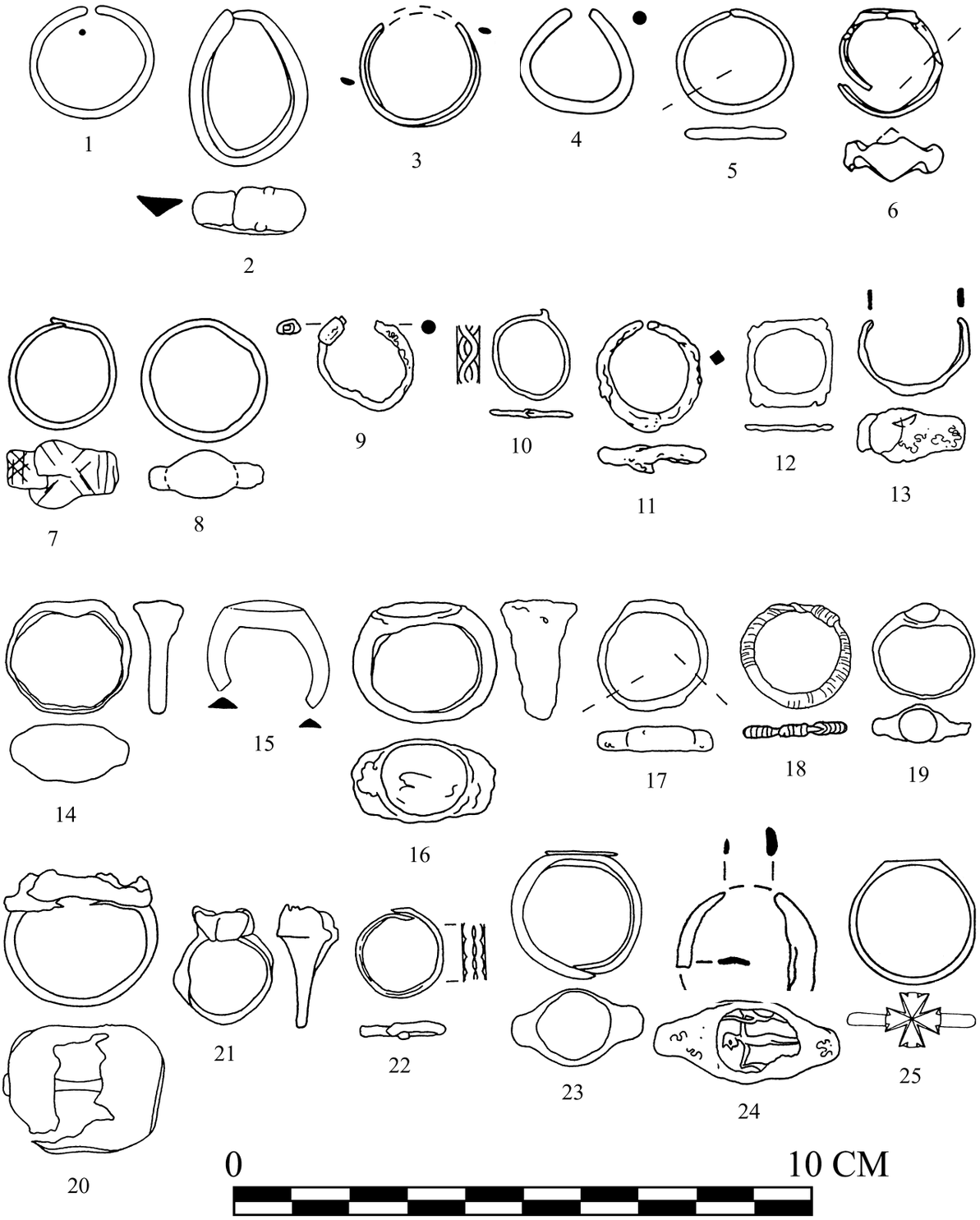


Table 13.6 Ring Stones.

Object No.	Locus	Stratum	Material	Dimensions
333b	C.1:	?	Rock Crystal	L 1.28; W .85; H .53
534	C.5:1	3	Faience	L .75; W .61; H .25
1889	C.6:20	2	Faience	L .8; W .5
2630	F.38:2	—	Rock Crystal	L 1.76; W 1.61; H .95
2712	C.10:32	11	Rock Crystal	L 1.05; W .9; H .45

Clay Ring

Object 928 (fig 13.17:2) is an ovoid ceramic piece made from a tubular chunk rather crudely overlapped and broken away. It is probably not finger jewelry. A similar clay ring (2920) was found at Corinth (Davidson 1952: 335; pl. 139) where it probably served as a votive offering because it was found in a temple deposit.

Shell Ring

Object 386 (fig 13.17:3) may be the fragment of a finger ring made from a shell. One edge is smooth and natural looking; the other is rough, suggesting an even break, but no filing. Its original inner diameter, at 1.1 cm, is rather small for a finger ring. The widest part of the band is 0.8 cm.

Amber Ring

Object 1214 (fig 13.17:4) is a fragment of a red amber stirrup-shaped finger ring. The band lies flat against the finger, but the outside edge has a ridge. The wide sides leading to the top of the ring would have made it bulky and awkward to wear. The top is an oval ending in two side points. It measures 3.1 cm from point to point and 1.1 cm across. In the center is a smaller raised oval outlined by an indented frame.

Glass Rings

Object 1189 (fig 13.17:5) is a fragment of a glass finger ring with a base that is broken and uneven in thickness with a flattened inner side to rest against the finger. It is dark red in color. The bezel is a flat, round piece of clay with vestiges of white paint. Object 2331 (fig 13.17:6) is another fragmented glass ring. It is a highly polished piece with variegated colors (brownish-red, grey, green and turquoise).

Lead Ring

Object 72 (fig 13.17:7) is a small lead ring. The width of the two-ended band is ca. 2 cm with an ovoid bezel formed from the same piece, making it stirrup-shaped. The oval has two pointed ends measuring 1.25 cm between them, and is 0.7 cm wide. Stamped into the surface is a design which has a border and two similarly pointed ovals next to each other. These ovals are filled with diamond-shaped indentations. The lobed spaces at either end were left smooth. Lead ring parallels, sometimes found together in a chain, can be found at Alishar Hüyük (Schmidt 1932: 164, fig. 206; 208, fig. 271, b 390; 266, fig. 351, b 668; 1933: 67, fig. 92; von der Osten 1937a: 268-69, figs. 294-95; 1937b: 111, 181, figs. 109 and 202).

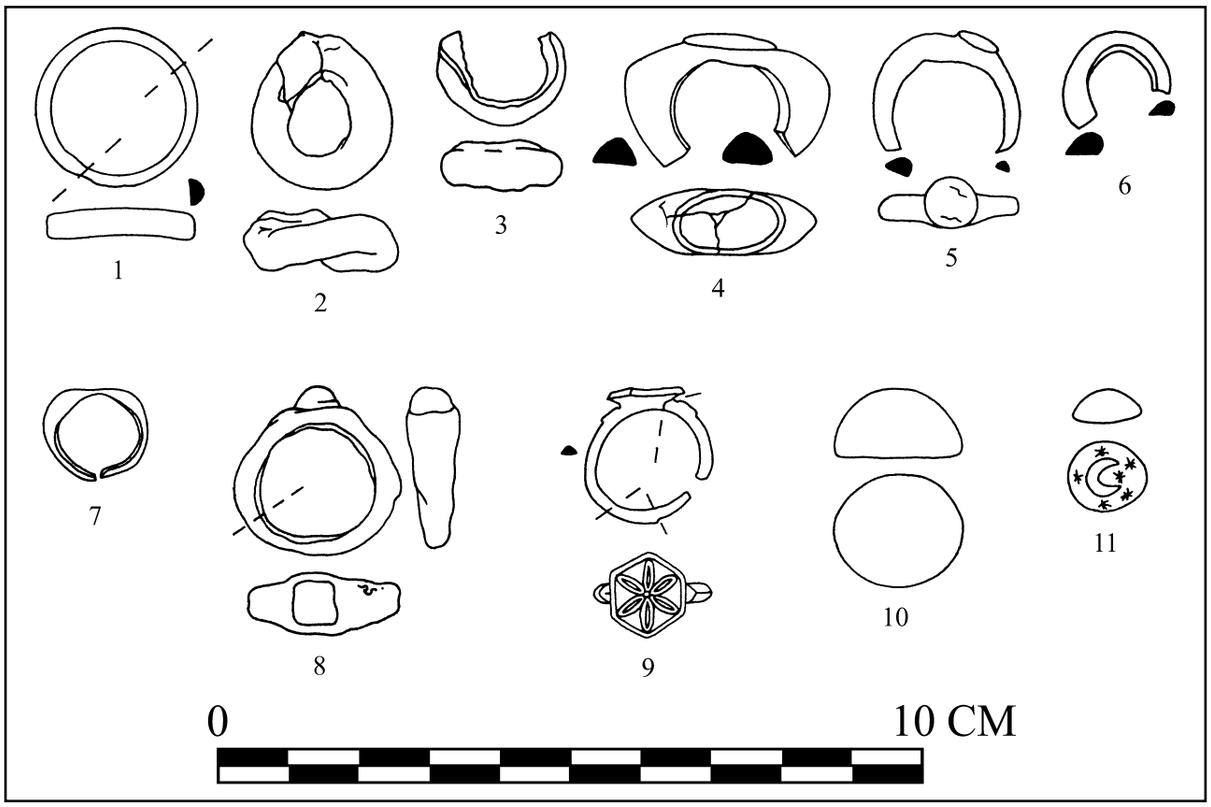
Silver Rings

The band of Object 997 (fig 13.17:8) graduates gently from 0.36 to 0.86 cm in the bezel area. The mount is square with a flat back and curved top. The band of Object 2609 (fig 13.17:9) appears to be made of foil beaten over a core with the seam on the inner flat side. Its outer side has a pronounced ridge. The bezel is a flat six-sided piece with a six-petaled flower crafted into a ridged hexagonal frame, soldered smoothly on to the ring base between two stylized leaves. The flower has ovoid, pointed petals designed with a compass. A ridge outlines the flower in repoussé with a center boss.

Ring Stones

Several loose ring stones (Table 13.6) were found at Hesban. Of those, two were made of

Figure 13.17 Miscellaneous Rings and Ring Stones.



faience and three from rock crystal. Those made of lightweight rock crystal were held against a wheel to make specialized designs. Object 2630 (fig 13.17:10) is a rock crystal stone with an oval shape, a flat back, and a curved surface. Its clear polished surface makes it a beautiful gem. Object 2712 (fig 13.17:11) appears to be a ring stone made of rock crystal. It has the unusual engraved decoration of a quarter-moon and six stars.

Earrings

Earrings are jewelry that is attached to the ear by piercing the lobe. Ear piercing appears to be one of the oldest forms of body modification. The earrings that were found at Hesban were made of bronze, silver, lead and gold metals.

Bronze Earrings

The number of bronze earrings (Table 13.7) found at Hesban is relatively few compared with other excavations in the region, or to other artifacts such as rings and bangles in the Hesban corpus itself. Of the whole (Objects 208, 589, 1034, 1204, 1468, 1496, 2020, 2418, 2449, 2450, 2595, and 2794; fig. 13.18:1-12) and identifiable fragments (Objects 328b, 439, 1378, 2457 and 2918; fig. 13.18:13-17) of bronze earrings, nine were found in Tombs (F4, F8, F14, F16, F27, F30, F31, F37). One other artifact (Object 2251; fig. 13.18:18) appears to have been a bronze earring pendant. There are no recurring styles, although there are four examples of the simple wire hoop with the looped clasp (Objects 1496, 2449, 2450, and 2595. This style also occurs in gold (Object 588).

Object 208 is a lunate-shaped earring. Its ends are graduated with the tips placed to meet exactly. It is comparable to a ring from Naʾur (ʿAbbadi 1973, pl. 42, fig. 2.7). Object 589 is a small bronze ring, perhaps an earring. The cross section of the band is rectangular; four flat sides, the outer side measuring 0.5 cm across. One end is slightly larger

Table 13.7 Bronze Earrings.

Object No.	Locus	Stratum	Dimensions	Remarks
208	C.2:6-9?	3	outer dia 1.9	lunate
328b	A.1:29	14	L 3.2	frag.; bulbous end
439	B.4:5	2	L 2.5; inner dia 1.25 outer dia 1.6	lunate frag.
589	F.4:4	—	outer dia 1.39; cross .5	rectangular crosssection; may have been suspended by a fine wire; simple ring shape
1034	A.5:4	3	outer dia .8; wire dia .11	rectangular crosssection; small, for infant or child
1204	F.8:6	—	outer dia 2.0; band .2 cm	frag.; rectangular crosssection; suspension hole
1378	F.14:1	—	L 1.0	frag.; clasp hook for necklace or earring
1468	C.1:84	14	L 2.45; W 1.85	penannular with two ends pointed; bent and partially crushed
1496	F.16.:6	—	dia 1.6	frag.; penannular wire with knot decoration (loop clasp)
2020	C.6:23	3	orig. dia 2.4	bent; flat strip, ends hammered and pierced for ear wire
2251	C.6:24	3	L 6.6; dia .1	wire with finer wire twists for pendant
2418	unknown	—	dia ca. 3.2, th .4	one end pierced for wire which wraps around the other end
2449	F.30:3	—	orig. dia ca. 1.6	penannular loop and clasp; mate to 2450
2450	F.30:3	—	orig. dia ca. 1.6	penannular loop and clasp; mate to 2449
2457	F.27:8	—	orig. dia prob. 2.3 cm	frag.; grooved pieces
2595	G.14:2	—	dia 2.5	penannular loop clasp striations on wire base
2686	G.14:8	—	dia 2.2	penannular decorated with sphere
2794	F.31:23	—	dia of crescent 2.6	frag.; flat crescent, "boat" shape? originally 3-or more dangles; ring and dot design
2918	F.37:18B	—	L of wire 2.2	wire with pointed end for insertion into the ear

than the other, placed to meet the smaller. At this point a slender wire might possibly have been looped around the ring to suspend it as part of an earring. Compare Petrie (1927: pl. 8.131).

Object 1034 is a tiny bronze ringlet with a narrow end for insertion into a pierced ear lobe. It could easily have been an the earring of an infant or child. The narrow end gradually widens and comes to an abrupt point after crossing half of the ring.

Object 1204 is a ring made of a flat band, 0.5 cm wide, with one end meeting the other. At the join the slightly larger end has a semicircular perforation with two broken edges, part, it would seem, of a smaller ring. Possibly a wire suspended this object via the smaller ring as an attachment to an earring. There are irregular lobed projections in the metal that may have had some design evident before corrosion.

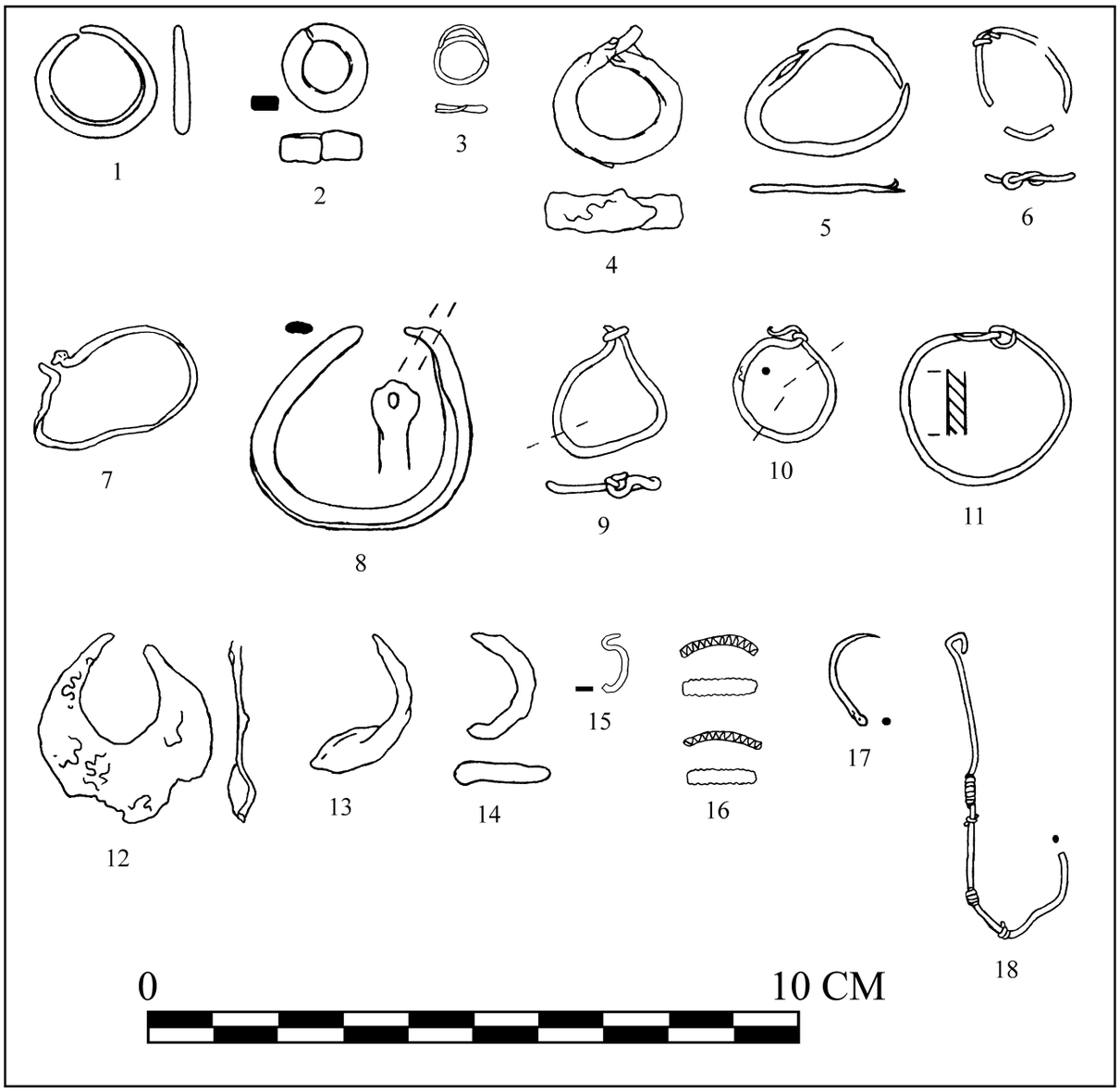
Objects 1468 and 1496 are penannular earrings. The former has two pointed ends for inserting into the pierced earlobe. It appears bent to some degree, but generally conforms to a typical ovoid form. The cross section of the wire is basically round, although this piece has obviously been flattened, and the metal wire split. The latter is made from delicate wire. Its ends have been overlapped and twisted once on the alternate side, forming a "figure-eight." See also Object 2449.

Object 2020 is a bent earring composed of a flat-base metal strip about 0.1 cm wide, with its outer edge slightly curved. Each of the two ends is hammered to a broader 0.2 cm width, and bent at right angles to the strip, making a separation of about 0.3 cm. One end is pierced with a single hole. A small wiremight have been inserted for affixing the ring to the pierced ear.

Object 2418 is a large ovoid earring. The bronze base is thick, its round cross section about 0.4 cm in diameter, with one end flattened to about 0.7 cm, and pierced. A fine wire was probably coiled around the smaller end, stretched across the 0.7 cm space between the ends, inserted into the ear and hooked into the hole at the other end. A single line, continuing around the full length of the ring, indicates the edge of an original foil piece, bent to form the tubular-base ring.

Objects 2449 and 2450 are probably mates. The former is made of a bronze wire, less than one mil-

Figure 13.18 Bronze Earrings.



limeter in diameter that is now bent, but its original diameter may have been about 1.6 cm. One end is twisted to form a loop; the other is pointed for insertion into the pierced lobe. The ends loop and bend to form a clasp. The latter consists of two fragments composed of fine wire, round in cross section, about 0.1 cm diameter. One end of the wire is formed into a loop; the other is bent to form a clasp. Parallels to these earrings are found at Pella (Smith 1973: 219, pl. 68:360) and Amman (Harding 1951: pl. 9.35).

Object 2595 is a whole earring with a complete clasp. The wire band, round in cross section, is about 0.12 cm in diameter. The clasp is made from one end of the wire looped back over itself. The opposite end is threaded into that loop and coiled once around the wire. There are striations on the wire base. Object 2794 has the classic crescent

Table 13.8 Silver and Lead Earrings.

Object No.	Locus	Material	Dimensions	Remarks
559	F.4:4	silver	dia 2.8 across base; at widest .38	perhaps an ingot
678	F.6:5	silver	orig. dia ca. 1.72 cm; widest part .47	frag.; pointed end for insertion; concave inner area, rounded outer
679	F.6:5	silver	orig. dia ca. 1.72 cm; widest .47	frag.; pointed end for insertion; concave inner area, rounded outer
1170	F.10:6	silver	L 3.8 cm; W 0.1 cm	penannular ring frag.; with gold bangle clasp
1395	F.14:3	lead	L 2.7; W 0.7	curved metal frag.

shape of ear jewelry. The small wire at the top of the crescent was inserted into the pierced lobe. The crescent is composed of a flat piece of bronze, measuring 2.6 cm across, at its widest point. Two dangles (now missing) hung from its lower edge. A series of ring-and-dot designs is stamped into the upper curve of the crescent. The style appears to be the "boat shape" of more elegant earrings (Maxwell-Hyslop 1971: 159, 188, pl. 134).

Object 2686 is an ornate earring. The base wire is thicker at the end where the ornamentation has been superimposed. It graduates down to fine diameter, perhaps to fit more gently into the ear perforation, and threads into the loop on the other end, where it goes once around the outside to form its own oval. The ornamentation consists of a sphere with small tubes through which the base wire has been inserted. The sphere has a bisecting ridge, as well as small rings near the tubes and at the back.

There are a number of earring fragments. Object 328b may be a fragment of a bronze earring of undetermined style. It has a graduated, bulbous end. Petrie (1927: 13, pl. 9.202) exhibits a possible parallel. Object 439 is the lower and thicker segment of a fragmented lunate earring, and Object 1378 is an earring fragment of unknown type. This piece is slightly curved with a flat inner edge. The metal, which is narrow at one end, is bent to form a hook. If it is not an earring, it could be part of a necklace clasp or the hook for a box fastener.

Object 2457 consists of two curved fragments, the edges of which are grooved. Object 2918 is a small, curved wire 0.1 cm in width. One end is pointed, possibly for insertion into a pierced lobe. The other end simply shows breakage.

Object 2251 is a piece of fine bronze wire, originally about 6.6 cm long and 0.1 cm in diameter. An even finer wire has been wrapped around it to make a series of twists. There is a loop at the end of the base wire. Strung with beads, which were separated by the wire twists, this object was probably an earring pendant.

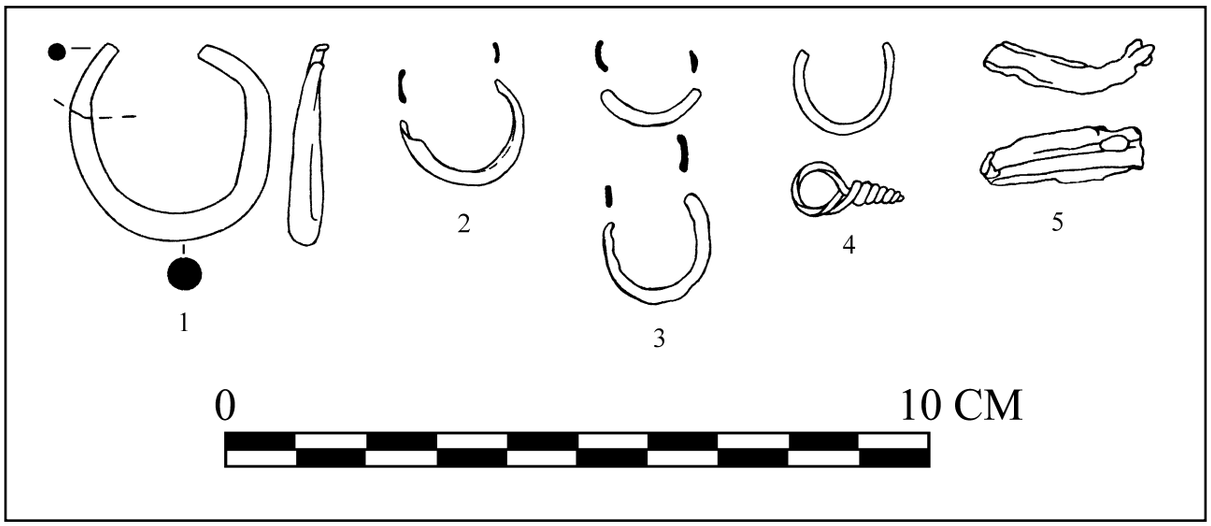
Silver Earrings

Four silver earrings (Table 13.8) were found at Hesban, all from the tombs, located across the valley from the tell. Object 559 (fig. 13.19:1) is a fragment of silver, tarnished but not corroded, that may have been part of an earring. The two ends are slightly graduated to have a smaller cross section than the main body. The metal of these ends is abruptly finished with a flat edge. The general shape of the piece resembles a rounded rectangle with the two ends pulled apart, leaving an empty space of about 1.4 cm. The cross section of the base is generally hexagonal. On the flattened surface of the outer edge are nicks in the metal. Those near the ends are heaviest. Perhaps in this area a thinner wire was wound around one end, inserted into the ear, and wound around the other. More probably, this piece is made up of old silver melted down to form an ingot in its present form.

Objects 678 and 679 (fig. 13.19:2-3) consist of three silver fragments of a pair of lunate earrings, of a classic style. The narrower ends with the fine wire and point, to insert into the ear, are now missing. What remains is the thicker lunate base of silver foil, graduated, with rounded outer edges and a concave inner area.

Object 1170 (fig. 13.19:4) is a silver fragment of an earring and part of a gold clasp, the "eye" for a bracelet or necklace. It was part of a small penannular ring inserted in the pierced lobe.

Figure 13.19 Silver and Lead Earrings.



Lead Earring

One lead artifact (Object 1395; fig. 13.19:5), found at Hesban, might be an earring (Table 13.8). It is a curved fragment about 2.7 cm long. The flat underside is 0.7 cm wide. Its other side is convex with ridges.

Gold Earrings

Fifteen gold earrings were found at Hesban (Table 13.9), all of which were found in the tombs. Of these artifacts, there are four matched pairs (Objects 588; 670 and 698; 750; 1534 and 1562). Two types of earring styles are prominent: the lunate and the hemisphere-with-dot styles. In terms of the chronology of these artifacts from Hesban, the lunate type tends to date to the Late Roman and Byzantine periods, while the hemisphere-with-dot type is from the Early and Late Roman periods.

Lunate Type

Objects 639, 750, 1002, 1158, 1592 and 1970 (fig. 13.20:1-6) are lunate. Among this type, Object 639 is a fragment, the top section of a large lunate. The body of the original piece was composed of gold foil, shaped around a paste filling. Hammering marks of the gold foil are visible. The top end of the crescent abruptly narrowed into wire. The pointed ends of the wire could be inserted into the pierced earlobe, then crossed over each other, and affixed by twists.

Object 750 consists of a small, delicate pair of matched earrings in excellent condition. Their bases are graduated, thicker at the bottom of the ring, with narrowing ends that cross over and twist once around the opposite end. Parallels can be found at Pella from Tomb 8, Grave 2, dated to the third century A.D. (Smith 1973: 187, 214-15, pl. 78.314, 484).

The crossover clasp of Object 1002 is placed to one side. The body is relatively thick, graduating abruptly to the wire ends. The thickness appears to indicate a hollow foil tube, characteristically filled with paste. Object 1158 is a gold fragment of an earring composed of a hollow tube once filled with paste. The inner side of the ring is flat, with wrinkles in the foil due to the curved position of the piece. The outer edge has a central ridge, making a triangular cross section. Originally it was probably a lunate with crossed ends. It compares in terms of it core and ends with an earring from the Roman tomb on Jebel Jofeh, ʿAmman (Harding 1950: pl. 27.216). In addition, Zayadine (1974: 140, pl. 64; fig. 2.23-24) notes two lunate earrings that are similar to Objects 750, 1002, and 1158 from Petra. They are a common Nabataean type dated to first century B.C. See also Negev (1971, pl. 26) for comparisons at Mampsis.

Object 1592 is a smaller version of Object 639. It has a large, hollow crescent of gold foil. There is

Table 13.9 Gold Earrings.

Object No.	Locus	Dimensions	Remarks
588	F.4:4	L 1.7; W 1.5	pair, penannular, loops intertwined; DAJ
639	F.6:4	L 3.34	large lunate frag., gold foil shaped around paste, crossover clasp; DAJ
670	F.6:5	L 1.65; dia 1.15	pair with 698 hemisphere; lower bar also 2 foil hemispheres; DAJ
698	F.6:12?	L 1.65; dia 1.15	pair with 670; hemisphere with dot lower bar; DAJ
699	F.6:12?	dia 1.33; L 2.73	daisy-like openwork bent upwards around central disc, wire to bend and form ring; DAJ
750	F.4:6	dia 1.33; dia 1.25	pair; lunate; crossover clasp, triangular crosssection; DAJ
753	F.4:6	dia 1.5	doily-like openwork center setting for a stone; DAJ
1002	F.10:8	dia 1.25	lunate; crossover clasp, paste-filled; DAJ
1158	F.1:2	L 2.4	frag.; triangular crosssection; probably lunate with crossover clasp
1534	F.18:6	L 2.67; dia hem. 1.3	pair with 1562; hemisphere with dot, single pendant
1562	F.18:24	L 2.67; dia hem. 1.3; L pend. 1.6	pair with 1534; hemisphere with dot, single pendant
1585	F.18:17	L 3.58; dia hem. 1.29, L pend. 1.3	hemisphere with dot, elaborate lower bar, three pendants; DAJ
1592	F.18:21	W 1.9; W crescent (crosssection) .9	smaller version of 639; lunate frag., crossover clasp, large hollow base; DAJ
1970	G.10:2	dia 1.76; W of base .28	lunate; 2 rows of balls crossover clasp; DAJ
2554	F.27:13	L 5.45	rosette w. pearl; head in cameo; dolphins on bar; 4 pendants; DAJ

no evidence of paste filling. The ends are small wires that cross over and are coiled. The gold is a coppery color between 10YR5/4 and 6/6 on the Munsell chart. Object 1970 is a gold earring with a narrowly lunate base whose ends graduate into two wires crossing over and coiled around the opposite end, like the clasps on bangles of types IIc and IId. A few millimeters below the coils, just where the lunate begins to widen, tiny hollow balls are attached in two rows, 20 on one row and 19 on the other. Comparison from the Helene Stathatos collection, in the National Archaeological Museum in Athens, attests twenty little spheres in a row (Amandry 1953: 284, pl. 42, 206).

Hemisphere-with-Dot Type

Five of gold earrings Objects 670, 698, 1534, 1562, 1585 (fig. 13.20:7-11) belong to the hemisphere-with-dot type. The distinguishing feature is a half-globe or hemisphere of gold foil with a round granule of metal affixed to the center.

Objects 670 and 698 are a pair of earrings, both made with a hemisphere center granule and a lower bar that has a "v"-shaped wire with superimposed coiled ends. On top of the coiled ends is the same kind of single dots that the hemispheres have in their centers. A dot is also at the join of each "v", and two others on the lower corners of the bar. At the lower edge of the bar, a separate piece of metal is soldered and folded back to make a back plate. Two loops were affixed on the lower edge of the back plate for pendants, as on Object 1585 (see below), but none are present. One loop is broken on Object 698. The ear wire is attached to the back piece and is bent over itself when worn (see fig 13.20:7). Further, on Object 670, it is attached to the top of the hemisphere at the juncture of another dot. The width of the bar on Objects 670 and 698 is 1.04 cm and 1.15 cm respectively. The diameters of both hemispheres were originally about 1.15 cm. Two fragments of crushed and torn foil hemispheres were found with Object 670, but their relationship to the earring is not clear.

Objects 1534 and 1562 represent another pair. A flattened strip of gold, about 0.2 cm wide, is flush against the inside of the disk, at the back of these objects. The top of this strip is thick and bent into a small ring with one end placed over or under. The strip projects outward opposite the granule and bends back on itself to form a loop. The bottom of the strip is twisted gracefully to form a ribbed loop turning back to graduate into a small, round wire coiled once around the top ring. Presumably this feature allowed the ring to attach the object to the ear. The small round wire of one end would have been inserted into the pierced lobe from underneath the flesh and made to coil once (with a tool) over

the ring. These earrings were evidently worn permanently, or at least, semipermanently.

The delicate nature of the foil hemispheres suggests jewelry limited to ceremonial or funerary purposes. The edges of both hemispheres are bent and ragged; the hemisphere bodies bend easily. Other features, however, suggest wear and repair. Both objects have a delicate pendant dangling from the twisted wire. These are made from a wire ring, the two ends meeting visibly at the back of the pendant on top of a flat piece of metal. The ends of this flat piece are coiled somewhat like the capital of a doric column. The pendant is soldered on just between the two flat coils. It is flat for about 0.3 cm, abruptly angles into a round wire for 0.5 cm and ends in a coil. On the front of the pendant where the flat part joins the double-coiled strip, under the ring is a central dot hiding the two ends of the ring.

Object 1534 shows signs of wear in that the pendant ring is extremely thin at the point of contact with the twisted backing wire. That wire at its base, where it is attached to the hemisphere, is also worn distinctively thin at one place making a clearly discernable "u". The most logical explanation is that the pendant has been repeatedly tugged on, perhaps by a child, with the result that the pendant ring and the earring's twisted wire neatly match each other at this point. Possibly, it was not ordinary wear that caused the damage. Rahmani (1976: 87) refers to Roman funerary practices where jewelry was torn off by mourners at the grave. Nevertheless, the other earring (Object 1562; see fig. 13.20:10), which is considered its mate though found in a different locus, exhibits dramatic signs of repair at this very point. A new piece of backing wire was added and soldered into place. Evidently the first wire broke at exactly the point where the companion earring is worn. A new ear wire was made by a less-skillful craftsman who did not perfect the wire twists nor extend them as far on either end of the rectangular cross-sectioned and longer wire, which is clumsily soldered to the point of breakage. The pendant ring shows some signs of wear, but not as much as that of Object 1534. There is yet another possible explanation for the worn-out nature of the artifacts. Similar earrings were worn on the ear with the fastener at the opposite end, i.e., the pendant would be hung from the opposite, fastened end. There is no reason why these rings could not have been worn either way in the ear.

Below the hemisphere-with-dot of Object 1585 (fig. 13.20:11) is a metal piece whose upper register has a coiled "v"-shaped wire. There are granules on top of each coil and on the top of the hemisphere where the ear wire touches, as in Objects 670 and 698. The lower register has a straight piece of wire placed horizontally below the coils. On it are what appears to be a stamped diagonal gadrooning, below which is a lower bar made from the edge of the back plate bent forward and ridged, adding to its ornate style. Two dots are placed at each end of the lower bar. A second triangular back plate at the top of the hemisphere supports the ear wire. Three 1.38 cm long pendants dangle from three loops on the back plate. The hemisphere edges are smoothly finished and the globe nicely rounded, not bent.

Other Types

Object 588 (fig 13.20:12) is pair of gold penannular earrings with a single loop on each end, forming an interlocked clasp. Parallels can be found in the Hanita tomb (Barag 1978: fig. 18.99-101) and Samaria (Barag 1978: 43, n. 101).

The basic shape of Object 699 (fig 13.20:13) is a round cup with a daisy-like effect of an openwork border. The border is a circular, 0.47 cm wide, frame on a separate piece of metal placed on the edge of the cup. The cup would have held a gemstone. The openwork is a series of 23 simple arches stamped into the gold foil. A rectangular gold-foil plate, about 0.45 by 0.32 cm, was placed behind the openwork border at the top to support the ear wire. Coppery solder is evident here. A wire projection with a graduated end extends upward. This entered the pierced lobe and was bent down to form the ring. It was twisted around a small ring on the back that forms the lower end of the ear wire.

Object 753 (fig 13.20:14) is a gold earring with a doily-like, round, 0.47 cm-wide, openwork frame, placed over a cup used to hold a gemstone (now missing). The stamped openwork design has a basic arch with "D"-shaped perforation. Two short vertical projections are delineated between the arches. There are eight cutouts. The base is a cup with the doily soldered on separately. A wire, affixed to the back of the cup with a small loop, is drawn across, bent outward and back, so that it is parallel with the smaller end. It is then fastened into the loop on the openwork. There is no rectangular plate to support the ear wire.

Object 2554 (fig 13.20:15) features a cameo framed by a gold disk with a rectangular bar and

four pendants. A smaller disk and pearl is suspended above the larger one and attached by an over-the-ear chain. The ring consists of a generally flat 1.22 cm x 1.10 cm ovoid piece of metal with a slightly concave back. A .25 cm wide strip with its upper edge bent over in a rather rough fashion making a *cloison* for an onyx stone was soldered to the edges at right angles. The bluish-white upper part of the onyx was carved to represent a face having a prominent nose and bridge between the eyebrows. Side locks meet at the chin and there are indications of locks on the forehead, and an incised headband. The headband appears to have an ornamental, decorative trim, or knot over the forehead locks, and then slants downward on both sides to the top of the ear area.

An openwork wreath of stamped metal was carefully soldered to the *cloison* rim outside the area holding the stone. This flat wreath measures about .34 cm as it extends outward, framing the carved head. The design is of a series of open arches, fourteen in all, whose inner heights vary from .11 to .15 cm. Between each arch is a scalloped cone, the sides of which are made from the engraved lines of the sides of the arches. Including the wreath it measures 2.1 cm × 1.85 cm.

Below the wreath is a 2.21 cm by 0.04 cm "bar." Two stylized animals are stamped into the metal. On the basis of Rahmani (1976: 86-87; pl. 23.4) there are vestiges of the open mouths and tongues of dolphins at end of the bar (cf. Rudolph and Rudolph 1973: pl. 129B). The tops of the dolphins' heads have been shaped into the heads of ducks turned backwards with their bills resting on what would be the dolphin's back and tail. A round stamped (but not pierced) eye is near each bill. A spherical granule rests on the top of each head, perhaps to hide the support strip behind. The tails are stylized with a scroll effect. Four perforations in the bar form the outlines of the stylized feature. The bar design is close to class 3 of Rahmani (1976: pl. 24.5).

Four pendants are suspended below the bar. They each have a "collar" of seamed metal placed just below the top ring. The .44 cm long collar has a slight flare as it gets larger at its lower edge. The basically slender pendant wire continues downward and ends in a double twist. The pendants measure 1.39 cm in length. They are attached to rings on the back of the bar. The design of the rings evidently is to give support to the bar and affix it to the wreath.

On the back of the bar between the two center pendant rings is the ear wire, which is a 0.1 cm strip in width, with its end affixed to the lower edge of the bar, then bending in an open loop on which the fastener is made. The ear-wire strip continues up the center of the basically concave disc, becomes round and is bent into a hoop that extends downward to the above-mentioned loop. In this position, when worn, it would be an "s"-shaped loop fastener.

At the top of the *cloison* where the ear-wire rises above the rim and bends outward, another half-circle loop is soldered. This is the point at which the ear-wire is in contact with the perforation of the ear lobe. One end is affixed to the ear-wire and the other to the back of the wreath. This loop is attached the lower ring of a second, smaller wreath. This wreath consists of eight open-work arches. Stamped between the arches is a double line making two very small scallops between the arches. The width of this wreath is .35 cm. It surrounds a round .67 cm cup that is about .3 cm deep. The diameter of cup and wreath is 1.35 cm. Across the diameter of the cup is a fine wire whose ends are roughly looped into the open arches for support. A decayed pearl was found here. Through its perforation the fine wire was inserted.

The back of the smaller disc has a series of small flat strips soldered to each arch to support the wreath. The ring that attaches to the top of the larger oval piece becomes a flat strip and extends up the back of the cup to form a top ring to attach the chain.

The chain is 9.34 cm long, but evidently it was not quite long enough to extend around the back of the ear of the wearer. Another kind of link appears to have been added to the beginning of the chain to lengthen it. This extension was made of a fine wire with double rings at each end and a straight portion between them. The length of the extension link is 1.24 cm. The chain is a single loop-in-loop type, very delicately and evenly crafted. Its opposite end holds a larger, two-ended ring which slides on the ear-wire hoop. The chain enables the smaller wreath to be supported above the earlobe covering the tragus. With the chain in position for wearing the entire piece would measure 6.40 cm in length.

Parallels have been found in tombs at Jerusalem (Baramki 1932: pl. 14.4; Hamilton and Husseini 1935: pl. 82.2; and Rahmani 1960: pl. 21.d; 1976: pl. 23.4), es-Salt (Hadidi 1979: pl. 55a.1), and Amman (Harding 1950: pl. 27.236).

Figure 13.20 Gold Earrings.

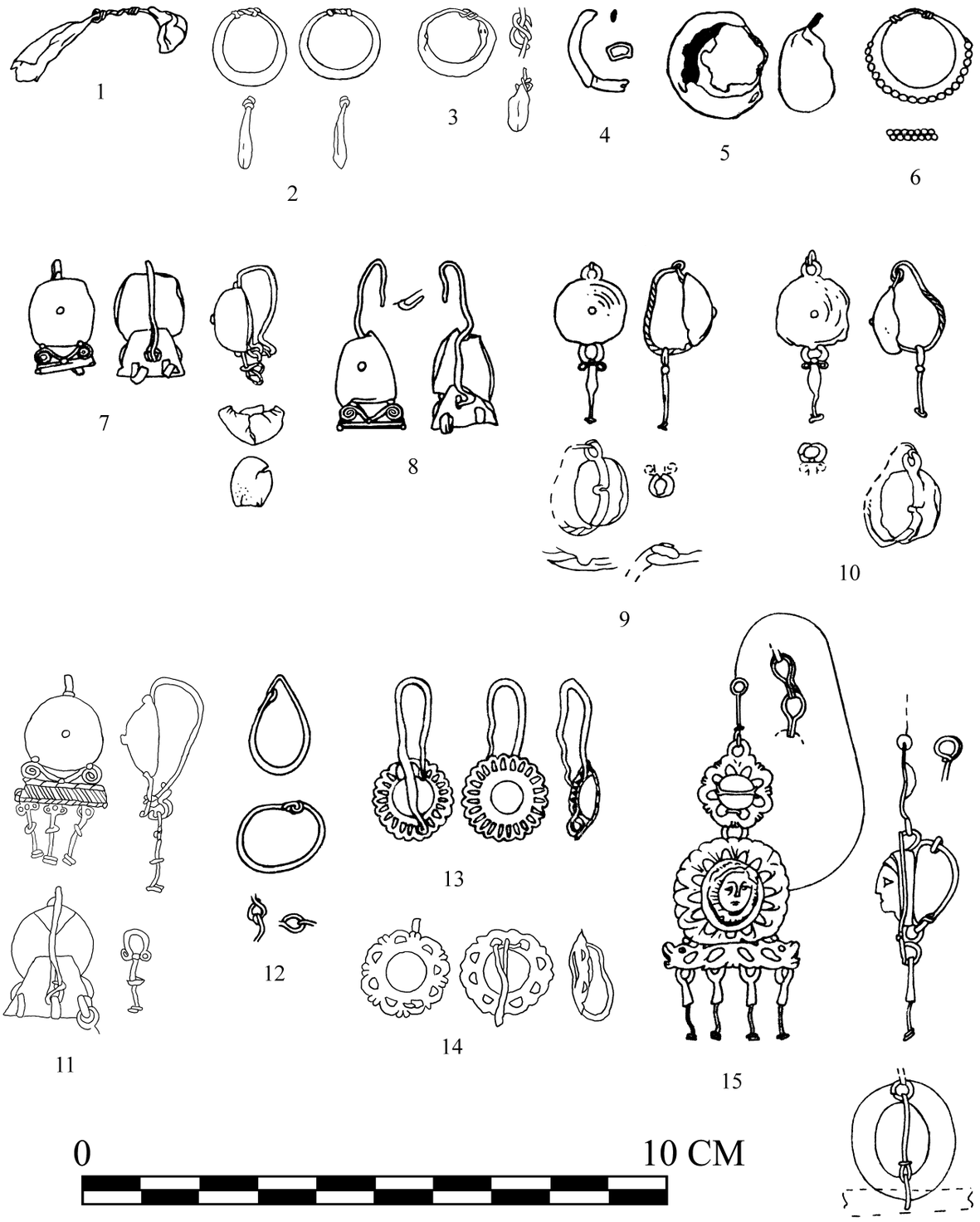


Table 13.10 Necklaces.

Object No.	Locus	Material	Dimensions	Remarks
749	F.4:5	bronze	orig. dia 10.3 cm	torque, permanent-type clasp
1070	F.10:6	bronze	orig. dia ca. 13.0 cm	torque, hook-and-eye clasp
2747	G.14:24	bronze	10.0 cm	torque, looped ends for fabric tie; DAJ
2901	F.38:12	bronze	10.0 cm	torque, no clasp; crescent pendant

Necklaces

Four complete or fragmented necklaces (Table 13.10) were found at Hesban.

Object 749 (fig. 13.21:1) is a bronze torque necklace in three fragments. It appears to have originally had a diameter of 10.3 cm. The ends are slightly graduated and are overlapped to form a small "permanent" clasp. One end is coiled once, the other, twice. This type of fastening suggests permanent wear because application and removal would have to be done with pliers. Parallels for this sample as well as the following two objects can be found at Lahun (Petrie 1927: pl. 3.41). Object 1070 (fig. 13.21:2) is also in three fragments. It may originally have had a diameter of 13.0 cm. Its slightly graduated ends turn back on themselves to form the clasp. One end is looped, with the last few millimeters of the wire coiled once around the base of the loop. The other end is turned back on itself to form a hook of two wire strands. At the base of the hook the wire is coiled one and a half times. This type of hook-and-eye fastening is characteristic of bangles, making the piece easy to remove; cf. Petrie (1927: pl. 3.40).

Object 2747 (fig. 13.22:1) is another bronze torque necklace with no apparent clasp. The ends are rolled back on each other to form single loops. The wire is a consistent 0.35 cm in thickness, except at the very end, where it narrows to form the loops. Possibly a string or fabric could have been inserted to tie the piece more securely. The torque could easily be worn in its present state if bent to apply and remove. Two ridges decorate the torque near the ends, about 1.5 cm from the tiny wire, making the bottom of the loop; cf. Petrie (1927: pl. 3.28).

Torque-type necklaces have a long history. They are known as early as the Early Bronze Age at Byblos (Jidejian 1968: pl. 35 and Dunand 1939: pls. 69. 2132 and 93.3915). Petrie (1927: 4) notes that torques were made during the 12th Dynasty, and later from the Ptolemaic to Coptic periods. The Hesban samples, found in Roman- and Byzantine-period tombs and a Byzantine church, fall into the later periods.

Object 2901 (fig. 13.22:2) is a bronze necklace with a crescent pendant. The present diameter of the torque is about 10.0 cm, but it was probably applied and removed by bending the metal, hence skewing its original size. There is no clasp. One slightly graduated end has two corroded coils around it; the coils are broken off on the other end. The crescent-pendant design has also had a very long history in the Near East. This one has a diameter of about 1.7 cm. The suspension loop is quite large, fitting over the coiled end with room to spare. The ring appears to be soldered on in two parts, with rounded ends at the top that do not quite come together. Necklaces with crescent pendants from Graeco-Roman times can be found in the Berry collection at Bloomington, Indiana (see Rudolph and Rudolph 1973: 68, 90, and 184, pls. 51, 70, and 150b).

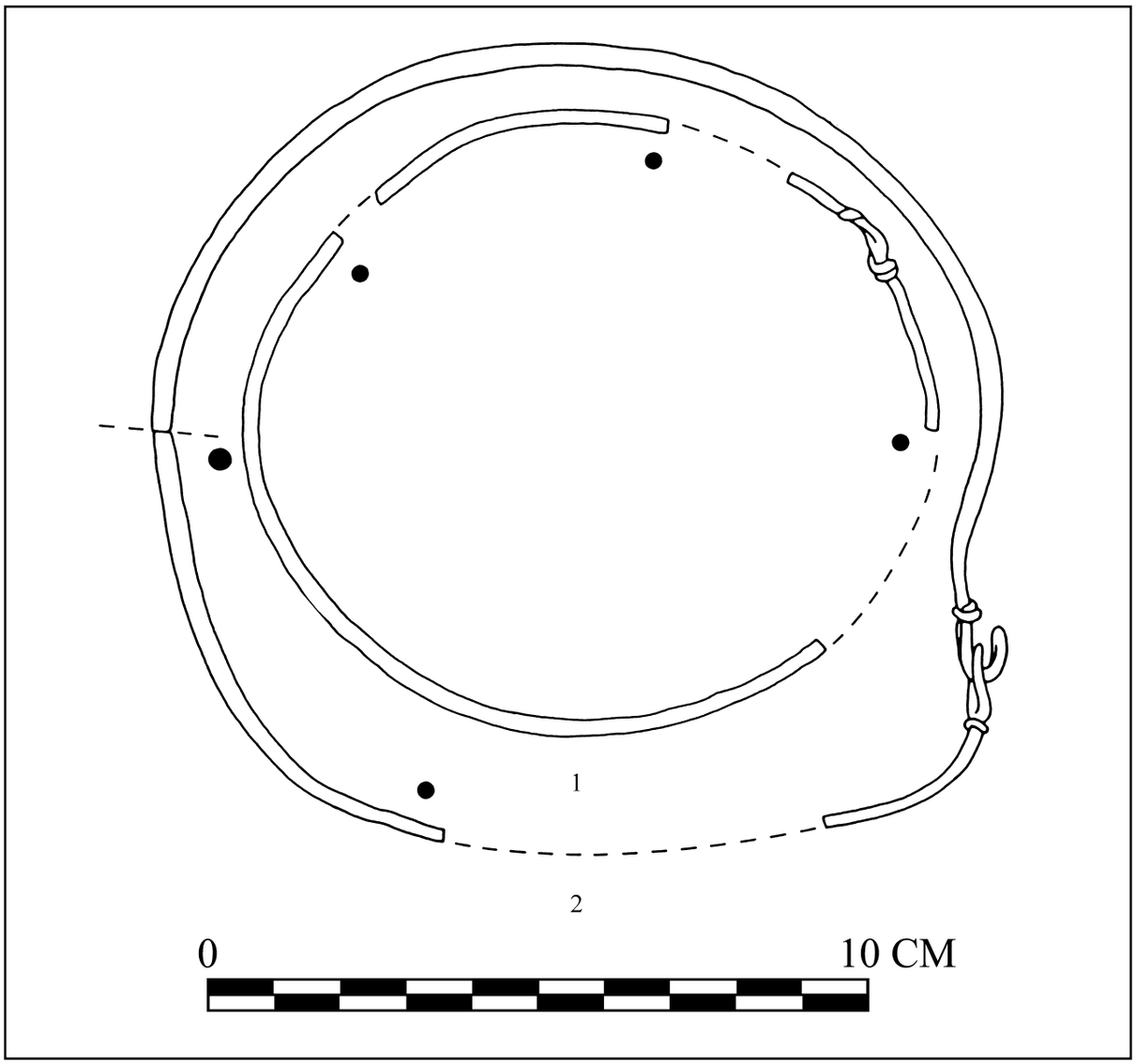
Chains

In terms of jewelry, chains represent a series of connected links, loops, or rings that are used to create necklaces and other artifacts of similar function and use. Twelve chain fragments (Table 13.11) were found at Hesban.

Object 15 (fig. 13.23:1) is a piece of delicate bronze chain with almost no corrosion. The links are shaped like a rounded "B," with the two ends separated, making the two loops. Object 26 (fig. 13.23:2) is a segment of bronze chain with "s"-shaped links, 2.2 cm long. The 0.55 cm-wide loops are twisted at right angles.

Object 356 (fig. 13.23:3) was designated in the field as "chain links," but it is difficult to see where

Figure 13.21 Necklaces.



the next loop would be in order to produce a chain. More likely these loops represent two cotter pins linked together. Although slightly bent, one loop is 3.67 cm long and 1.04 cm at the head. The other loop is broken at one end, with its other end bent upward. Originally it was probably about 4.27 cm long with a 1.14 cm head. Object 536 is a corroded piece of iron, 7.3 cm long, shaped into a 3.17 cm wide loop with two separated ends. Like Object 356 it is probably a cotter pin. It is too large to be a piece of jewelry.

Object 650 (fig. 13.23:4) is a silver-colored fragment of modern plastic, made up of three small bowl- shaped segments or *cloisons*, which might have held "stones." Object 809 (fig. 13.23:5) is a single bronze link from a chain that would have been overly heavy for a piece of jewelry. It is "s"-shaped with the loops at right angles. Its cross section is about 0.4 cm diameter. There is a possible parallel to this object in Pertrie (1927: 5, pl. 4.49), which is also similar to Objects 1377 and 1550 (below).

Figure 13.22 Necklaces.

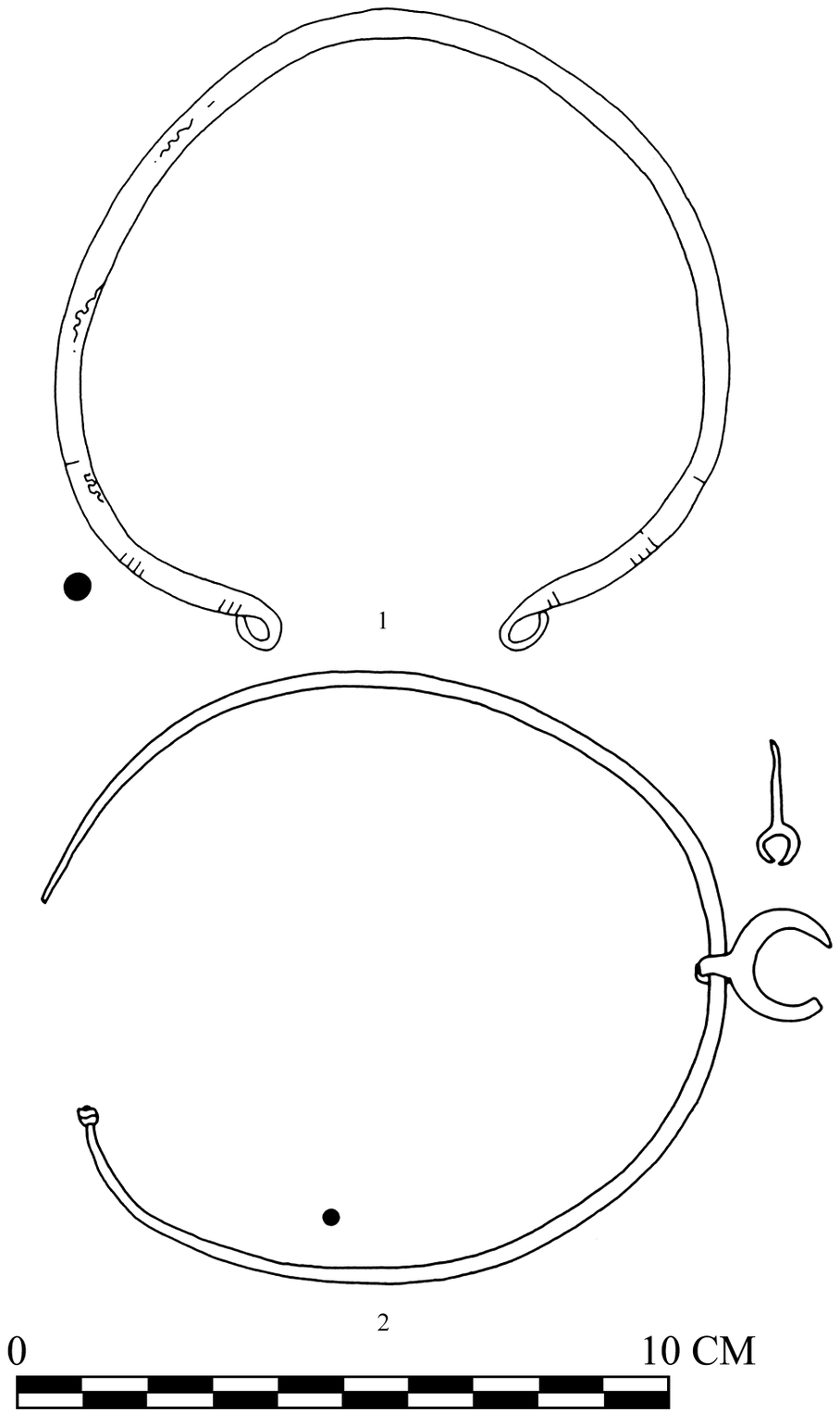


Table 13.11 Chains.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
15	C.2:1	2	bronze	L .8 cm; W .3 cm	B-shaped links
26	D.2:1	1	bronze	L 2.2 cm; W 0.55 cm	S-shaped links
356	B.2:1	2	iron	L 6.5 cm; W 1.15 cm	2 cotterpins
536	D.1:44	11	iron	L 7.3 cm; W 3.17 cm	corroded cotterpin
650	A.2:25	—	modern plastic	ca. 2 cm. long	cloisonne group; frag. of necklace?
809	B.4:16	3	bronze	L 3.2 cm; W 1.65	S-shaped link
1143	D.6:33I	4	iron	L 3.1 cm; L 2.3 cm	2 corroded frags.
1377	F.12:4	—	bronze	L 2.4 cm; W .8 cm	S-shaped link
1550	D.6:62	11	bronze	L 2.8; W 1.6 cm	large S-shaped link
1893	A.8:1	1-3	iron	L 4.6 and 4.2 cm; W 1 cm	2 double-looped corroded links
2220d	C.5:87	3	bronze	L 6.8 cm	part of a steelyard?
2809	F.38:3	—	iron	dia .7 cm	corroded eye of clasp?

Object 1143 (fig. 13.23:6) is two large corroded iron fragments, originally thought to be "chain links." Both pieces were curved into hooks. Because of their size, they are probably not jewelry objects.

Object 1377 (fig. 13.23:7) is probably a chain link, consisting of two loops with ends forming an elongated "s." The round-wire cross section measures 0.2 cm. Object 1550 (fig. 13.23:8) is another "s"- shaped, single bronze chain link. Possibly it was used in jewelry, but if so, it would be part of an unusually heavy chain, similar to Object 809.

Object 1893 (fig. 13.23:9) consists of two corroded iron chain links, each shaped into double loops, one having two ends to fasten to the top loop of the next. One loop is 4.6 cm in length; the other 4.2 cm. The rectangular cross section of the wire measures about 0.5 cm. Because of its size, it was probably not a jewelry chain. Object 2220d is a delicate bronze chain 3.9 cm long, made up of "B"-shaped links. Attached to one end is a ring 1.1 cm in diameter. At the other end is a tightly-interconnected piece of metal formed into two loops, one at each end, with a length of wire about 1.0 cm between them. The length of the entire piece is 6.8 cm. It is possibly a segment of a steelyard.

Object 2809 (fig. 13.23:10) is tiny, corroded iron ring designated as "chain link" in the field. There are no special markings to indicate its use. Since its diameter is only 0.7 cm, however, it might have been used as an "eye" in a clasp.

One of the uses for chain was in headpiece jewelry. Colledge (1976: 150) mentions head chains that went over diadems which looped around the temple on pieces found at Dura Europas and Hatra during the second century A.D.

Pendants

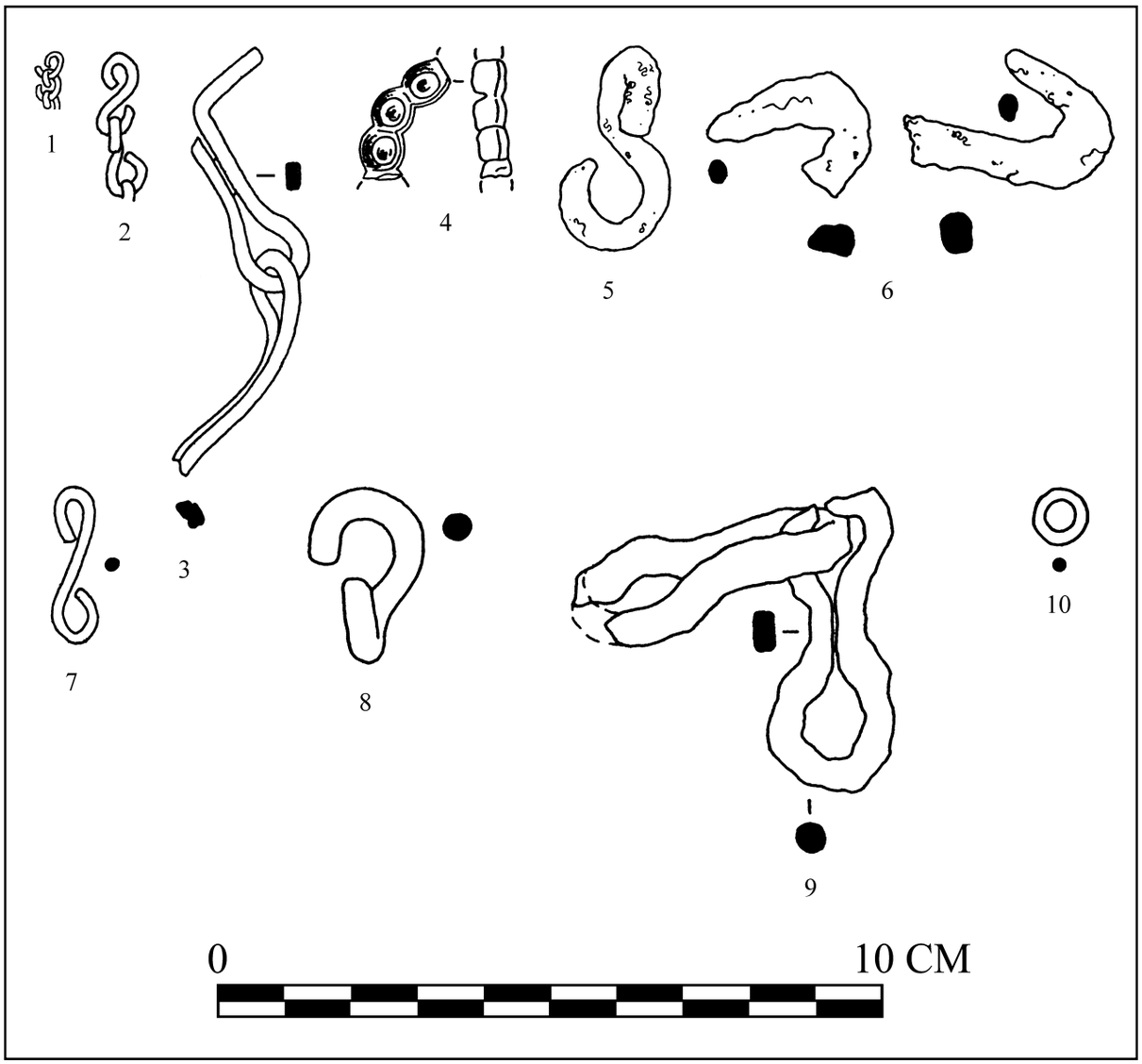
Pendants are so designated because they are pierced for suspension on a cord to be worn with beads around the neck, or occasionally as parts of earrings. Pendants (Table 13.12) found at Hesban include those made of shell as well as functional whetstones and miscellaneous varieties.

Shells

Objects made of shell are included as pendants because when perforated they probably were used as jewelry. Object 1032 (fig. 13.24:1) is a cone (*Conus*)[1] shell, with a round top and a hole for suspension in the center at the top. Petrie (1914: pl. 14.110a) notes a somewhat similar artifact.

Hemispherical-shaped Objects 1499 and 1728 (fig. 13.24:2-3) are dog-cockle (*Glycymeris*) shells with holes for suspension at the head. A parallel can be found in Petrie (1914: pl. 14.114). Object 1795 (fig. 13.24:4) is the same type of shell, but has no perforation hole. Other shells without perforation holes include Objects 1786 (fig. 13.24:5), which is a Turban (*Turbo*) shell (cf. Petrie 1914: pl. 15.118g,

Figure 13.23 Chains.



h) and 1861 (fig. 13.24:6), which is a clam (*Tridacna*) shell.

Object 2451 (fig. 13.24:7) appears to be the fragment of a giant clam (*Tridacna*) shell, shaped as a pendant with hole for suspension. Its ovoid shape now measurs 5.5 cm at the long end.

Whetstones

Four whetstone pendants were found at Hesban. They were probably used as utilitarian jewelry by agricultural workers out in the field in order to keep their scythes sharp. Objects 229, 2383, and 2754 are made of dark greenish-grey steatite, and are approximately the same size.

Object 229 (fig. 13.24:8) is a complete artifact, 7.8 cm in length. Its width at the bottom is 2.25 cm and it is 1.8 cm across the perforated end. It is 0.9 cm thick at bottom and 0.4 cm thick at the perforated end It is a dark greenish-grey (Munsell 5G5/1) in color. A possible parallel was found in Cemetery A at Tell el-Mazar (Yassine 1984: fig.

Table 13.12 Pendants.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
30	B.1:1	1-2	bronze	L 4.2 cm; W 2.0 cm	triangular; corrosion obscures decoration
50	C.2:7	3	lead	L 4.1 cm; W 1.9 cm	frag.; figure in relief on one side
81	C.1:5	3	bone	L 3.0 cm; W 1.9 cm	frag.; corner with ring-and-dot design
229	C.3:4	2	steatite	7.8 x 2.25 x .9 cm	—
242	C.4:5	3	red granite	L 9 cm x W 1 cm x th 9 cm	—
807	B.2:17	9	animal tooth	L 6.2 cm	horse incisor?
1032	A.5:45	9	shell	L 5.1 cm	hole for suspension natural?
1202	F.5:4	—	clay	L 2.2 cm; W .6 cm	necklace attachment?
1228	B.2:60	15/16	bone	L 6.8 cm; W2.6 cm	stylized eyes?
1499	F.18:4	—	shell	dia 4.2 cm	hole
1510	C.3:23	6-8	bronze	L 2.67 cm; H 1.77 cm	DAJ; miniature duck
1606	F.18:8	—	bronze	H 3.8 cm; W 3.6 cm	triangular piece; no suspension ring
1624	D.3:59	12	stone	H 1.63 cm; dia 1.82 cm	DAJ; cone-shaped stone seal; indistinct carving
1728	B.4:205	15/16	shell	dia 2.25 cm	hole
1786	C.5:56	6	shell	dia 2.6 cm	no hole
1795	B.7:4	3	shell	dia 2.5 cm	no hole
1861	D.2:72	11	shell	L 6.5 cm	no hole
2236	G.4:11B	—	stone	L 4.8 cm; W 5.0 cm	DAJ; triangular-shaped earrings
2383	C.5:101	3	steatite	7.15 x 1.25 x .7 cm	frag.
2406	C.5:98	3	ceramic	L 2.2 cm; W 2.0 cm	reworked Roman Terra Sigillata frag.
2451	F.30:3	—	shell	L 5.5 cm	hole
2452	C.1:126	18	sandstone	H 3.8 cm; W 3.3 cm	DAJ; indistinct seal
2459	C.1:126	18	limestone	H 3.8 cm; W 3.2 cm at base	unfinished seal
2490	F.31:9	—	silver	H 1.25 cm; W 1.0 cm	—
2506	C.8:22	3	ceramic	2.7 cm x 2.6 cm	reworked sherd
2754	G.16:14	—	steatite	6.84 x 1.38 x .6 cm	DAJ
2864	G.14:39	—	bronze & glass	L 3.25 cm; W 1.5 cm	perhaps a bead pendant
2902	F.38:3	—	bronze	2.0 cm x 2.1 cm	setting for a stone
2953	F.37:5	—	glass coin-like stamp	H 2.5 cm; dia 2 cm	profiles of 2 people facing each other

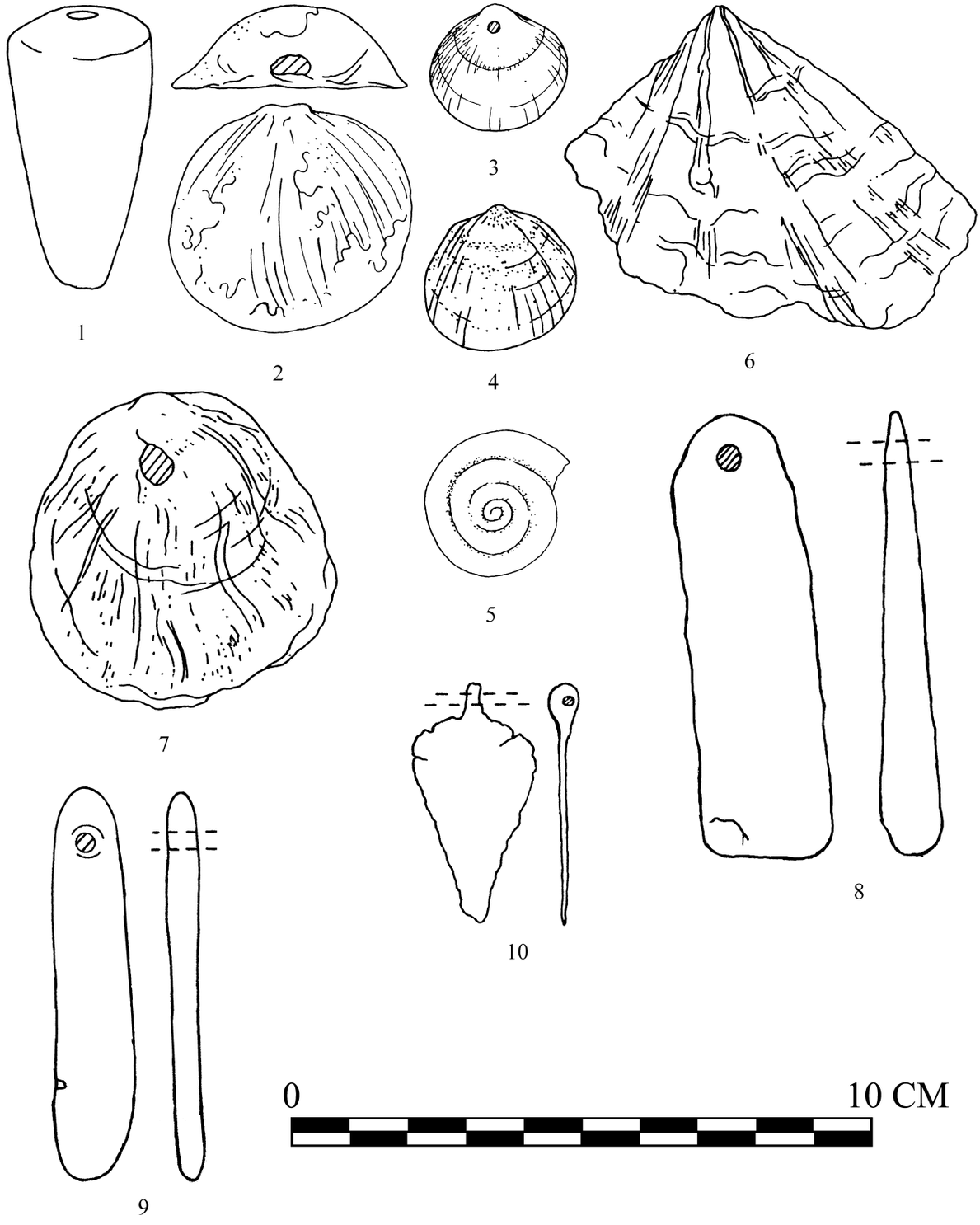
61.13). Object 242 is made of a rectangular piece of red granite. The top was broken before completion while the perforation was being drilled. A new perforation was made 1.3 cm from the broken top.

Object 2383 is a fragment of a whetstone that continued to be used while broken. Originally it may have been cracked down the center, perhaps when the perforation was being made. The piece was then turned in the other direction and a new perforation made. Object 2754 (fig. 13.24:9) is another complete sample with the perforation through its slender top. Knife scratches are present on the surface. Comparisons can be found at Akko (Ben-Arieh and Edelstein (1977: fig. 14.25, pl. 8.6) and Alishar Hüyük (Schmidt 1932: 168, fig. 212; 1933: 75, fig. 114; and von der Osten 1937b: 93, fig. 92), though these objects are much earlier in date than those presented here.

Miscellaneous Pendants

Object 30 (fig. 13.24:10) is a bronze foil triangular-shaped pendant, measuring 4.2 cm in length and 2.0 cm across the widest "shoulder" section. The suspension lobe rises enigmatically in one piece out of the metal and appears to be pinched at right angles to the artifact. A hole perforates the lobe to one side. The perimeter edges of the piece are ragged and split. Corrosion obscures any decoration. This object may have been a miniature triangular plaque (Platt 1976: 103-11), worn in this case as a necklace pendant.

Figure 13.24 Pendants.



Object 50 (fig. 13.25:1) is a lead foil fragment with a perforation through a thick, striated area, suggesting a jewelry pendant. Both sides of the foil piece have engravings. One side has been whitened to indicate a figure in relief, perhaps dancing with one arm extended; a tambourine in the hand; a skirt hanging to the knees; and two stick-like legs with the feet turned sideways and the heels together. The fragment is about 0.1 cm thick.

Object 81 (fig. 13.25:2) is a fragment of worked bone with two straight edges, forming a right angle. On one side, the surface seems to have been polished and a ring-and-dot decoration is stamped close to each edge. Five ring-and-dots, 0.2 cm in diameter, decorate the shorter edge; seven others, 0.2 -0.3 cm in diameter, decorate the longer side. At the end of this side, a 0.3 cm hole was drilled completely through the piece, which is about 0.3 cm thick at this edge. Neither of the edges appear polished or finished. The break on the third edge of the fragment is curved toward the drilled hole. The reverse surface is undecorated but appears polished. For this reason it is likely that the fragment was part of a piece of jewelry, probably a pendant, where both surfaces were finished, rather than an inlay.

Possibly made from an incisor of a horse, Object 807 (fig. 13.25:3) is a curved, ivory-colored artifact, pointed at one end and wider with irregular surfaces at the other. Some polishing seems to have been done. One side of the object is flat, about 6.2 cm in length. The other has two surfaces, making a triangular cross section. One surface has an indented line extending the full length of the piece. A 0.3 cm diameter suspension hole was drilled at about the midpoint through the object.

Object 1202 (fig. 13.25:4) is a ceramic object with variegated colors of browns and greys, measuring 2.2 cm in length. There are four sides, each about 0.6 cm wide. Along one of these sides is a complete donut-shaped piece with a hole through the center. There are fragments of two others, one showing part of the perforation. These circular "beads" have been applied to the surface. One end of the object is rounded; the other has a hole that reaches about 0.2 cm into the body, but does not pierce the opposite end. Evidently something was inserted into the hole, perhaps a necklace string or clasp arrangement functioning with the bead.

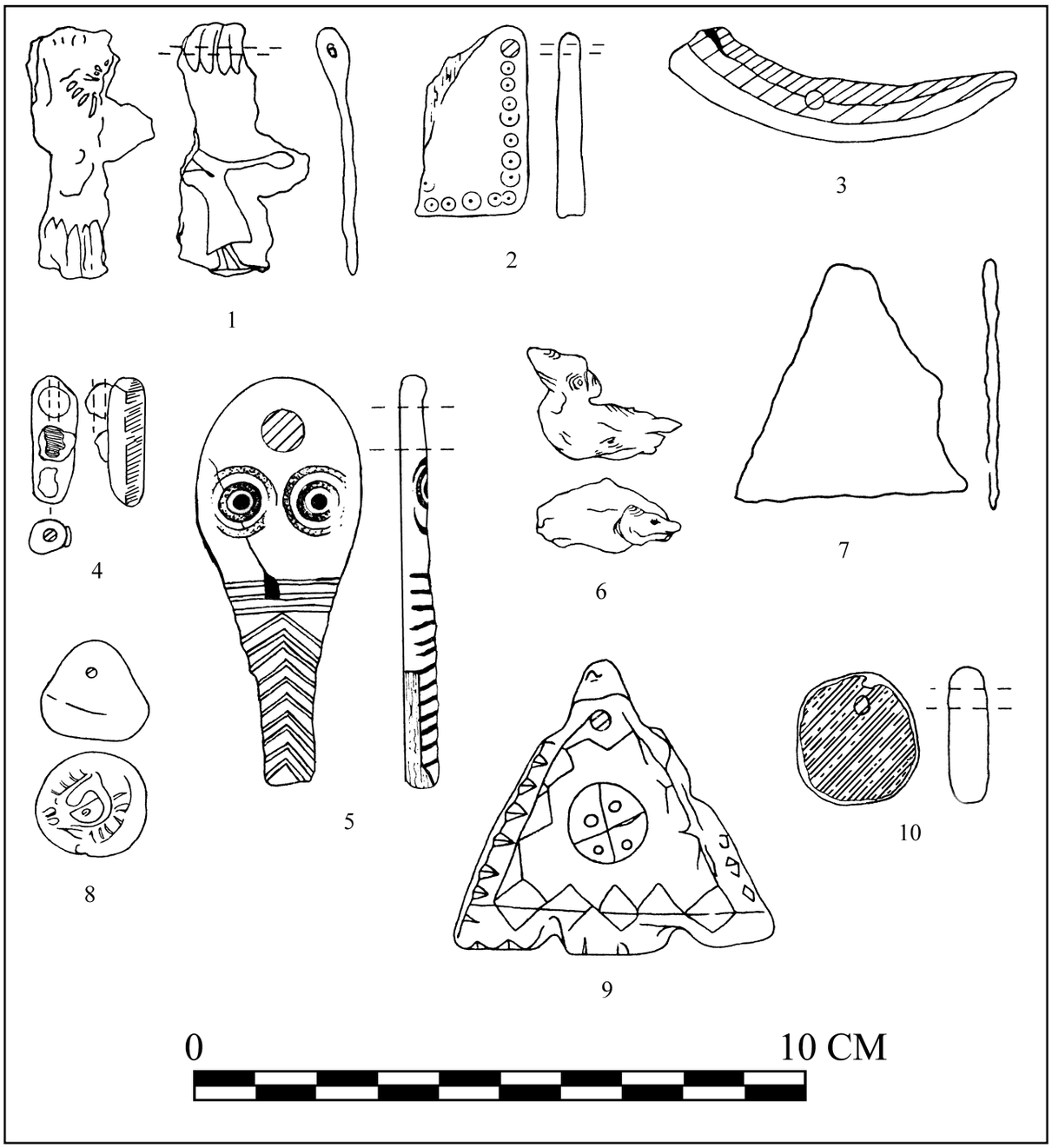
Object 1228 (fig. 13.25:5) is a bone pendant 6.8 cm long, with a large 2.6 cm wide lobe, that tapers into a straight neck. The neck was originally about 0.8 cm wide, but is now chipped. The reverse side is flat and smoothly polished. Here, it is slightly convex in shape and decorated with engravings. A large suspension hole, 0.7 cm diameter, is placed near the top of the lobe. Two ring-and-dot designs are located below it, each with a deep dot, a slightly less deep first ring, and an even shallower second ring. Traces of red color occur in the first ring. Perhaps these decorations are stylized eyes. As the lobe narrows into the neck, three lines are engraved straight across. Below it is a series of ten chevrons, each one placed evenly, about 0.2 cm apart, along the neck of the piece.

An almost identical object was found at Tell el-Hesi (Rose, Toombs and O'Connell 1978: 144, fig. 18.9). It differs from the Hesban pendant in that it has two (instead of three) lines engraved across the neck, and six (instead of ten) chevrons below it. The Hesi object dates to the Hellenistic period. Other parallels include one with eight chevrons found in Grave 1 of Cemetery A at Tell el-Mazar (Yassine 1984: 16 , fig. 61.11), which dates to the Iron Age IIC/Persian period, and another piece with three ring-and-dot designs found at Gerar (Petrie 1928: 17, pl. 33.44), dating to the Late Iron Age.

Objects 1510 and 1606 (fig. 13.25:6-7) are made of bronze. Object 1510 resembles a duck. There is no suspension hole, but a cord could have been tied around the "duck's" neck. Object 1606 is a flat triangular-shaped piece with broken edges. Possibly a broken tip held a ring for suspension. Without the ring it is difficult to classify the piece as jewelry.

Objects 1624 and 2236 (fig. 13.25:8-9) are stone artifacts. Object 1624 is a cone-shaped seal with a perforation in the upper triangular part for suspension. The length of the perforation is 0.86 cm. There is a definite carving on the surface, making it a seal; but the precise subject matter of the carving is elusive. Object 2236 is an enigmatic triangular pendant, dark gray in color. One side is chipped, but in general it is in excellent condition. Along the lower edge two triangles are cut out. Near the top, by the suspension hole, two "shoulders" appear to be cut out from the edge. An incised line around the edges of the piece produces a definite triangle to frame the decorations. Small, incised triangles decorate the base frame line on both sides. The center decoration is a circle divided into four quadrants with a dot incised in each. Outside the carved line on the left side of the pendant there is a series of seven notches. The back is smoothed but uncarved.

Figure 13.25 Pendants.



A seventh century B.C. Lamashtu amulet from Uruk, relating to women in childbirth, with a border of incised triangles on two sides and top of a rectangle (*Jewellery Through 7,000 Years* 1976: 215) is a possible parallel.

Object 2406 (fig. 13.25:10) is an ovoid pendant made from a sherd of Roman Terra Sigillata pottery. The object is 2.2 cm high, 2.0 cm wide, and 0.6 cm thick. There is a 0.3 cm diameter suspension hole drilled in it.

Objects 2452 and 2459 (fig. 13.26:1-2) appear to have been prepared and functioned (in at least one case) as stamp seals. Object 2452 is a oval pink (Munsel 5YR8/4) sandstone pendant with a suspension hole. Into the lower flat surface has been carved a seal set in an incised frame. The subject of the carving is now indistinct. It is 2.18 cm thick at the base and 1.18 cm at the top. Object 2459 is an ovoid piece of limestone, with a flat lower surface and a long perforation for suspension, that was prepared for a stamp seal. Perhaps it was discarded when part of the seal face and the side of the object chipped away. Some guide-line scratches appear visible on the stamp face. As stamp seals these objects would have been suspended, when not in use, from the neck of the owner.

Object 2490 (fig. 13.26:3) is a silver pendant, perhaps from an earring. The base appears to be fluted, and there are side decorations that effect hanging cords. The body is 1.25 cm in diameter and 0.61cm at the neck. There is a possible parallel from Cave of Letters (Yadin 1963: 92, fig. 44.43-7.18).

Object 2506 (fig. 13.26:4) is an oval ceramic pendant, light brownish-grey (Munsell 10YR6/2) in color. It was made from a sherd and has slightly polished edges. It measures 2.7 cm by 2.6 cm, and is 0.8 cm thick. A 0.6 cm diameter suspension hole is drilled through the sherd near the top end.

Object 2864 and 2902 (fig. 13.26:5-6) are made of bronze. Object 2864 is a wire pendant strung with glass beads. The semicircular shape of the top wire suggests an original earring with a diameter of about 1.5 cm. A lower wire forms three loops, carefully spaced across the semicircle. From each of these 0.3 cm diameter loops, wires were suspended with a loop at the top, and bottom holding a series of beads. At present only the outer two of wire loops have bead dangles; the center loop is empty. One dangle has four beads, the other, five. One loop actually has two dangles, one with five-beads, the other with three wire twists and a single bead. Object 2902 is an oval pendant. The stone is missing, but the frame suggests its setting. The suspension loop is formed by an extension of the frame bent over a cylindrical core and fastened to the back.

Object 2953 (fig. 13.26:7) is an amber-colored (Munsell no. 5Y7/6) glass pendant made from an engraved coin-like stamp impressed into soft glass. A lobe of glass is formed around a long hole for suspension. From the bottom of the object to the top of the suspension lobe is 2.5 cm. The circular seal has a diameter of 1.3 cm. Around the seal is a curved frame of glass. The seal has the profiles of two people facing each other and includes their upper chests. Both have visible hairstyles or headdresses. Similar glass pendants were found in the rock-cut tomb at Tarshiha, dating to the fourth century A.D. (Iliffe 1933: 9-16).

Hairpins

Hairpins (Table 13.13) are needle-like pieces of jewelry designed to be almost invisible when inserted into the hair. The more ornate ones may be encrusted with jewels and other ornaments, but more often they are utilitarian, made of bone, ivory or metal.

Bone and Ivory Hairpins

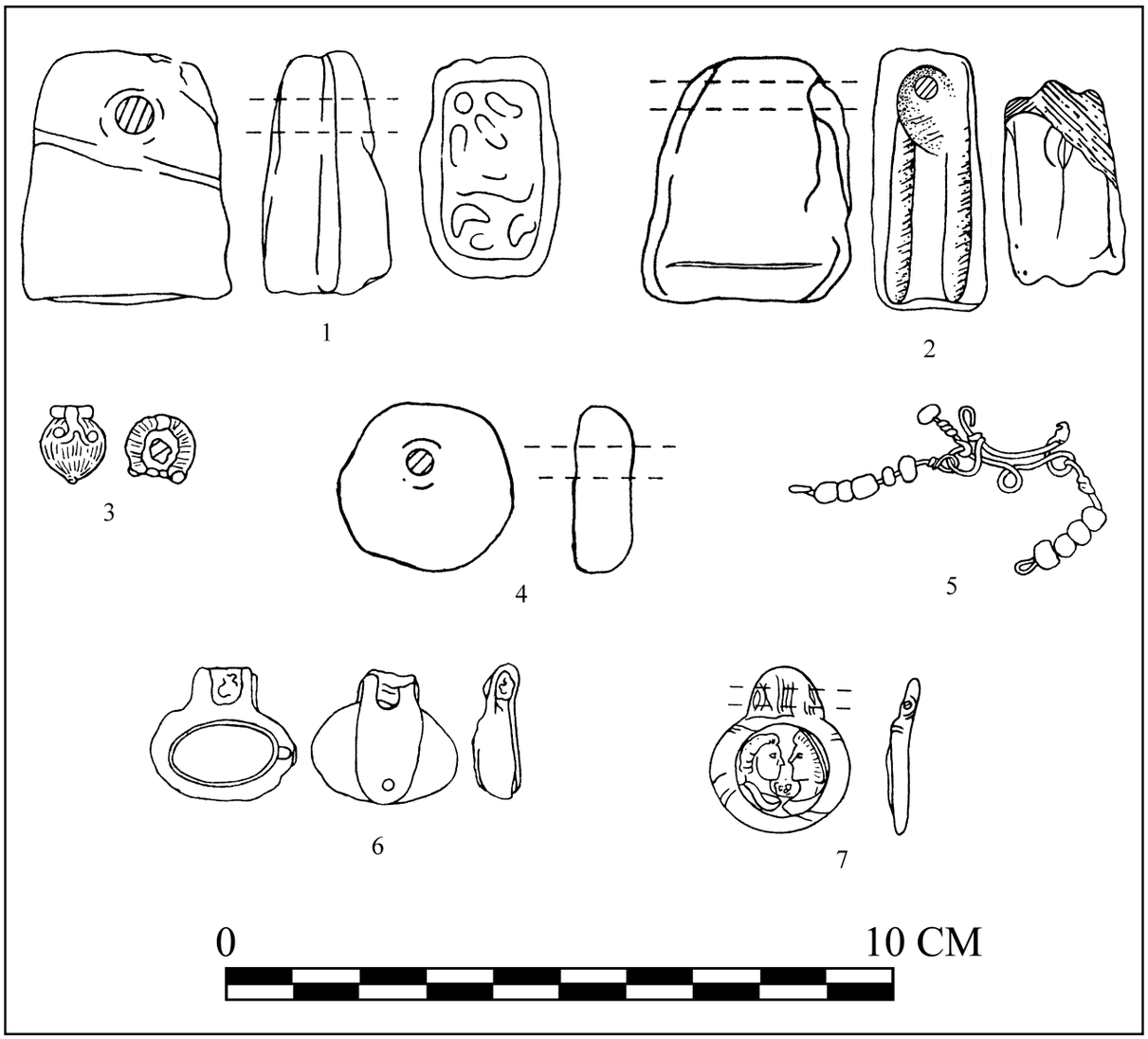
Bone and ivory hairpins at Hesban appear in three main styles: plain ovoid, round lobe with collar ridges, and faceted head. The most ubiquitous is the plain, undecorated, ovoid lobe.

Plain Ovoid Lobe

Object 1060/1160 (fig. 13.27:1) is a hairpin that was presumably used to hold a sizable hunk of twisted, braided, or netted hair in place. The object was originally almost 9.0 cm long. The ovoid lobe takes up 1.1 cm of that length. The respective pieces were found in different, but closely related loci (2A and 2B) of the same tomb (F.1). Similar bone pins have the lobed-shaped head crafted in one piece with the stave. Object 150 (fig. 13.27:2) has a lobe of 1.2 cm in length, carved on top of a stave fragment. The complete fragment now measures 2.9 cm.

Object 400 (fig. 13.27:3) is 5.0 cm in length and has a small thin lobe at its base where it is carved from the stave. The stave graduates from 0.17 cm at the base of the lobe to 0.34 cm near the break. Although the lobe is much smaller than any of the other hairpins from Hesban, its shape is comparable. Object 1041 (fig. 13.27:4) is a fragment, the lobe of which is 0.9 cm long, with a crudely formed ridge at the top of the stave where it attaches to the lobe. One side of the lobe is rather flat, adapting to the original structure of the bone with its natural striations.

Figure 13.26 Pendants.



Object 1161 (fig. 13.27:5) compares favorably in size and shape with the lobe of Objects 1060/1160 and 150. The head is of one piece with the stave. The length of the lobe is 1.2 cm; and the complete fragment 3.1 cm.

Object 2802 (fig. 13.27:6) is an ivory pin that has a plain ovoid lobe, 1.2 cm in length. The stave has a pointed end, the entire object measuring 10.0 cm. The pin is hand carved and the head is of one piece with the stave. Its distinctive feature is the pervading deep-green color, of which there are two shades. Starting just below the head and running about 2.9 cm down the stave, the color is a dark green (+/- 5G5/2, "grayish-green"), at which point there is an abrupt change to a lighter (+/- 5GY7/1, "(light) greenish-grey") shade. Although the color changes abruptly, there does not seem to be a change in the fabric of the pin.

Object 2888 (fig. 13.27:7) has a lobe, slightly larger than the above samples, measuring 1.4 cm in length. Like Object 1041, one side of the lobe is flattened, either following the shape of the bone, or to rest more securely in position against its background. The point of the stave is broken.

Table 13.13 Hairpins.

Object No.	Locus	Stratum	Material	Dimensions (length)	Remarks
150	C.2:9	?	bone	2.9 cm	frag.; ovoid lobe, plain; dia. of stave frag. .3 cm
223	C.1:6	3	bronze	7.8 cm	DAJ; stave; baluster head; blunt point; dia. of stave .5
400	C.1:20	?	bone	5.0 cm	frag.; small ovoid lobe, plain; dia. of stave .34 cm
419	C.1:11	6	bone	2.1 cm	frag.; ribbed lobe; dia. of stave frag. .3 cm
668	F.6:5	—	bronze	11.5 cm	frag.; ball of two hemispheres; dia. of stave frag. .23 cm
926	D.6:33B	9	iron	8.23 cm	arrowhead-like point
996	F.1:2A	—	bone	3.4 cm	frag.; dia. of stave frag. .43 cm
1041	F.1:2A	—	bone	2.66 cm	frag.; ovoid lobe, plain, ridge; dia. of stave frag. .43 cm
1060	F.1:2A	—	bone	3.6 cm	frag.; ovoid lobe, plain, =1160; dia. of stave frag. .4 cm
1067	F.10:6	—	bone	3.5 cm	frag.; ringed lobe; dia. of stave .4 cm
1160	F.1:2B	—	bone	5.4 cm	frag,; stave, goes with 1060
1161	F.1:2B	—	bone	3.1 cm	frag.; ovoid lobe, plain; dia. of stave frag. .37 cm
1210	F.5:4	—	bone	5.2 cm	frag.; dia. of stave frag. .38 cm
1302	D.3:21	9	bone	7.8 cm	frag.; ridges; dia. of stave frag. .4 cm
1389	B.4:94	14	ivory	9.7; dia .5-.7	DAJ; one end broken; ridges; round head; hole in head
1607	F.18:21	—	bone	3.5 cm	DAJ; frag.; ovoid lobe, plain ring on stave; dia. ca. .5 cm
1608	F.18:21	—	bone	3.2 cm	frag.; ovoid lobe, plain rings on stave; dia. .45 cm
1616c	F.18:22	—	bone	3.3 cm	frag.; very similar to 1617; dia. of stave .5 cm
1617b	F.18:19	—	bone	2.15 cm; 5.7 cm	frag.; round lobe and ridges; dia. of stave .47 cm
1888	C.6:16	2-3	bronze	11.7 cm	—
2600	G.4:86	—	bone	9.1 cm	frag.; round lobe and ridge; dia. of stave .45 cm
2646	C.5:167	3	ivory	4.8 cm	frag.; oval with point, two rings; dia. of stave .46 cm
2683	F.27:23	—	bone	3.8 cm	frag.; hairpin point; dia. of stave .32 cm
2717	F.31:8	—	bone	8.0 cm	frag.; stave frag., dia. .45 cm
2748	F.38:3	—	bone	5.4 cm	frag.; pointed end of stave; dia. .46 cm
2752	F.38:3	—	bone	2 cm	frag.; head faceted like a bead, dia. of stave .33 cm
2779	F.27:23	—	bone	11.6 cm	DAJ; whole pin; cone head w. ridge; dia. of stave .43 cm
2787	F.27:23	—	bone	11 cm	DAJ; pomegranate head; dia. of stave .4 cm
2788a	F.27:23	—	bone	4.4 cm	frag.; head faceted like a bead; dia. of stave .41 cm
2788b	F.27:23	—	bone	2.7 cm	frag.; head faceted; ring and dots; dia. of stave .35 cm
2788d	F.27:23	—	bone	2.45 cm	frag.; “milk bottle” head; hole for stave; dia. .43 cm
2802	F.38:3	—	ivory	10 cm	DAJ; ovoid lobe; plain green color; dia. of stave .44 cm
2819	F.31:8	—	bone	orig. 9 cm ?	3 frags.; round lobe and ridge; widest stave frag. .5 cm
2884	C.9:46	3	bronze	5.9 cm	corroded, crescent head, dia. of stave frag. .36 cm
2888	F.38:3	—	bone	10.5 cm	ovoid lobe; dia. of stave .36 cm

Parallels

Parallels to Object 400 can be found at Samaria (Crowfoot, Crowfoot, and Kenyon 1957: fig. 114.9-11, 13-15). Other possible parallels to Hesban ovoid, lobed hairpins can be found at Salamis, on Cyprus (Chavane 1975: pls. 40; 47.487-89; 48.490-91).

Round Lobe with Collar Ridges

Object 1067 (fig. 13.27:8) is a fragment measuring about 3.5 cm. Its 0.9 cm long, lathe-turned head, is a rounded lobe with a flattened top measuring 0.8 cm in diameter. Four rings decorate the rounded portion near the stave, which has been inserted into a hole at the base of the head. The flattened top of the head has three carved rings and a center pinhole. The upper part of the stave also has four rings.

Object 1302 (fig. 13.27:9) is damaged at both ends. Its extant length is 7.8 cm. The carving of the head is obscured except for two ridges making one ring. Objects 1607 and 1608 are fragments. Object 1607 (fig. 13.27:10) has a relatively large, rounded, 1.8 cm, bulbous head, of one piece with the stave.

On the stave just before the head section are four rings. Object 1608 (fig. 13.27:11) compares in general shape and carvings on the stave below the head with Object 1607.

Object 1616c (fig. 13.27:12) is a fragment 3.3 cm long, with a small lobe about the size of the stave shape, but differentiated by a waist with two carved rings below it. Object 1617b (fig. 13.27:13) is in two fragments: the head with a fraction of the stave measuring 2.15 cm in length, and a larger (5.7 cm) section of the stave. The lobe is of one piece with the stave. It has a rounded top with three defined ridges made by four incised rings.

Object 2600 (fig. 13.27:14) is a large fragment of a pin with a long stave and its point broken off. The remaining section measures 9.1 cm. The stave is delicately graduated, expanded near the head area, then narrowing to form a hemispherical lobe with a lower ridge. One area of the small head is flattened, perhaps allowing the object to rest against the body, or simply adapting to the shape of the bone matrix. Object 2819 (fig. 13.27:15) consists of three fragments of what was once a single bone pin. Although the head is damaged, it seems to compare with Object 2600 in size and design.

Parallels

A parallel to Objects 1607 and 1608 was found in Tomb 12 on the Nablus Road in Jerusalem (Hamilton and Husseini 1935: pl. 81.24) which dates to the third century A.D. Object 1617 is similar to a much more elaborate pin with gold leaf on the lobe from one of the Roman tombs of Shmuel Ha-Navi Street, Jerusalem (Rahmani 1960: pl. 20:E).

Faceted Head

Object 2752 (fig. 13.28:1) is a 2 cm long fragment of a pinhead that is carved in one piece with its stave. One surface of the pinhead is flat and unfinished, perhaps to rest against the body. The remaining faces are part of a diamond-shaped carving. The surfaces on either side have smaller diamond features faceted like a bead.

Object 2788 consists of three bone pin pieces, two of which are pinheads with a diamond-like, faceted shape as Object 2752 (above). Object 2788a (fig. 13.28:2) is 4.4 cm long with rather crudely carved, multiple, flat surfaces. Object 2788d (fig. 13.28:3) is 2.7 cm long with a similarly carved head, while Object 2788b (fig. 13.28:4) is a large pinhead with a hole for the insertion of a separate stave in the bottom. The basic shape of the head can be compared to a milk bottle with two carved rings on either side of four ring-and-dot designs. Its diameter is 0.9 cm.

Parallels

Parallels to faceted pins can be found at Samaria (Crowfoot, Crowfoot, and Kenyon 1957: 459, fig. 114.27) and Beit Nattif (Baramki 1936: pl. 9.16), the latter similar to Object 2788d, dated to the Roman period.

Other Bone and Ivory Hairpins

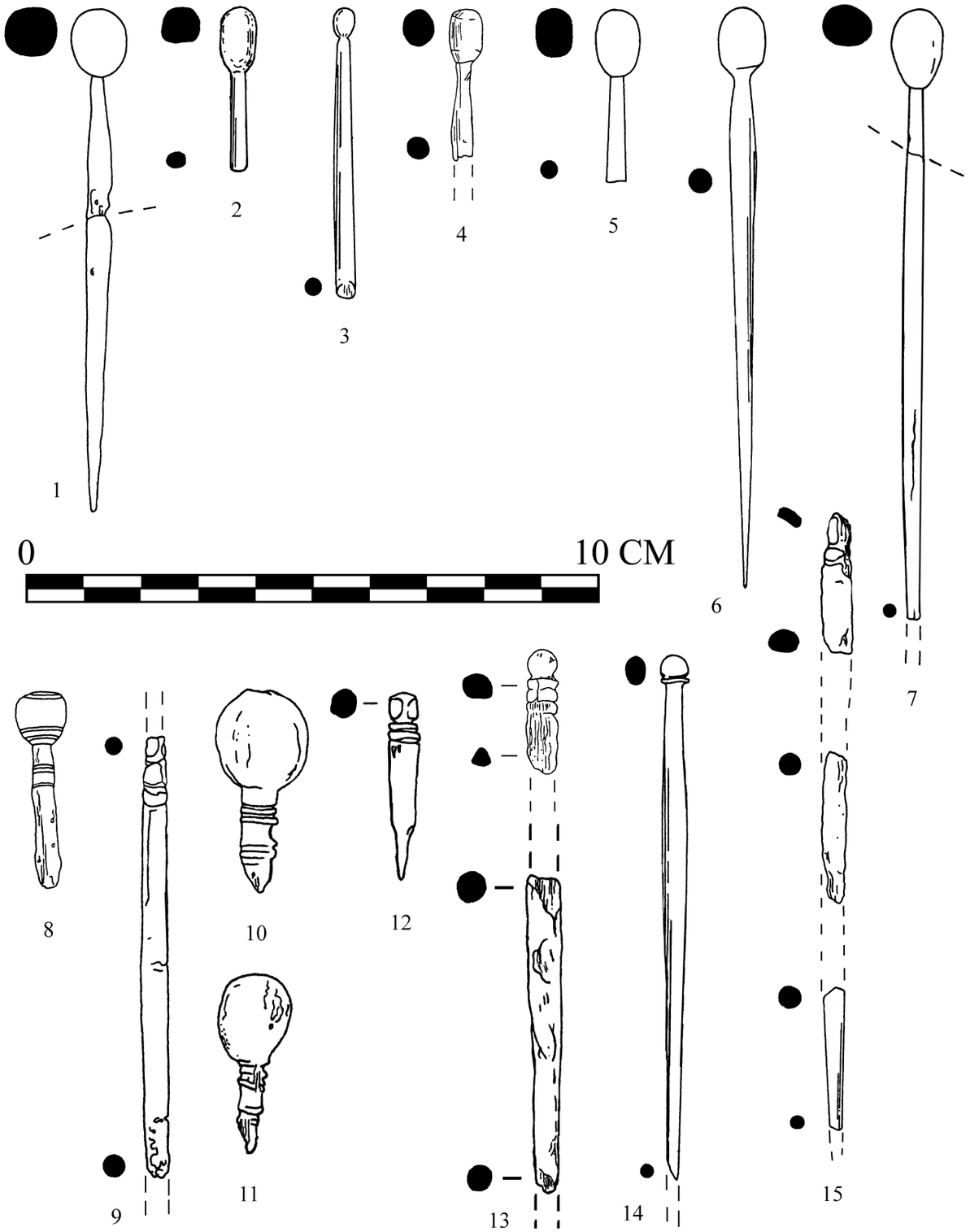
Object 2646 (fig. 13.28:5) is an ivory fragment, 4.8 cm long, that displays an elegantly-shaped head that is one piece with the stave. The head emerges from two carved rings. Its basic shape is oval, pointed at one end with a waist at the other. Below the rings are another slight waist. This artifact is an example of Davidson's (1952: 278) "pear-shaped" type. Parallels exist at Delos (Boccard 1938: 278, pl. 75.725:7) and Salamis, on Cyprus (Chavane 1975: pl. 48. 492).

Object 2779 (fig. 13.28:6) is a complete pin, measuring 11.6 cm. The head, shaped with a slight indentation from the lathe, is not larger than the width of the stave. The cone-shaped head is followed by a single ring made from two ridges. It has a parallel at Corinth (Davidson 1952: pl. 118. 2307), dated to the first century A.D.

Object 2787 (fig. 13.28:7) is a pin that has a long, graduated stave measuring 11 cm in length, with three carved rings near the head. The separately-made head is a delicately carved pomegranate with cross-hatchings on the main body. There is a single ring making a lower frame, and the three rings above the hatching lead to a sharply-differentiated sepal area. The sepals of the fruit are "v"-shaped and are carved unevenly. In the center of the flat, top surface is a pinhole, perhaps made from the lathe when the rings were carved. There are Egyptian (Petrie 1927: pl. 19.20, 22-23), Greek (Jacobsthal 1956: 38, 185-200, fig. 145.6-7; Davidson 1952: 282, pl. 118) and Cypriot (Karageorghis 1974: figs. 66.75; 69.132; pls. 77, 170.132) parallels of pomegranate pinheads.

Object 419 (fig. 13.28:8) is a fragment of a bone pin with seven slanted ribs carved along the length

Figure 13.27 Hairpins.



of the head. Two fragments (Objects 996 and 1210; figs. 13.28:9-10**)** appear to be parts of pin staves.

Also classified as bone and ivory hairpins are fragments (Objects 1389, 2683, 2717 and 2748) of which their original length is assumed to have been between about 8.0 to 11.5 cm, with staves ranging between 0.23 and 0.50 cm in diameter at their widest extant. However, similar shafts have also been classified as spindles and needles under textile tools.

A number of the pins were found in groups in the same locus (Objects 996, 1041, 1060/1160 and 1161 from locus 2 of Tomb F.1; Objects 1607 and 1608 from locus 21 of Tomb 18; and Objects 2779, 2787, 2788a, 2788b, and 2788d from locus 23 of Tomb F.27). This might suggest that they belong in sets, the property of a single owner.

Metal Pins

Objects 223 and 668 are complete bronze pins. Object 223 (fig. 13.28:11) consists of a baluster head and a .5 cm stave with a blunt point. Object 668 (fig. 13.28:12) is a bronze pin found in three pieces. The head is a beautifully rounded ball composed of two hemispheres. The reconstructed length of the entire piece is 11.48 cm, the ball being 1.32 cm diameter. The artifact was found in the pelvic area of a skeleton, which may suggest its use as a garment rather than a hair pin.

Object 926 is an iron pin, measuring 8.23 cm long, complete with a point at the end of its graduated stave of 5.6 cm. The head appears to be a triangular arrowhead with a rounded base.

Object 1888 is a bent bronze piece that might have functioned as a toggle pin. Its consists of an 11.7 cm long shaft that is decorated with rings and cross-hatching. The opposite end of the shaft is broken. Object 2884 (fig. 13.28:13) is an unusual object, featuring a fine bronze stave and complete point, measuring 3.9 cm in length. Extending from it is a crescent head of flattened metal one piece with the stave. One edge of the crescent is missing. Corrosion obscures any design on the surface except for the borders, which seems to have simple ridged gadrooning. Four rounded globules are placed at regular intervals on the borders.

Brooches

Only a few brooches (Table 13.14), defined as an ornament worn fastened to clothing with a pin and catch, were found at Hesban.

Object 1185 is a bronze brooch with a missing pin. On the reverse side of the object are the fixtures of the coil and clasp at opposite points. The widest part of the crescent measures 3 cm. The ends of the crescent fan out into double lobes. Three small protrusions placed on the outside edge of the crescent seem to indicate some kind of decoration. Corrosion obscures the face, but in the center is a slight circular bulge suggesting an original design.

Object 1361 (fig. 13.29:1) is an oval bronze brooch with a dark green (Munsell 5GY4/5) glass jewel set in a gilt double frame. The stone appears to have a flat back and a cone-shaped, convex outer side. The double oval frame has striations on both registers. Greenish copper shows through the markings on the frame. On the reverse is a single fixture for the clasp, but the pin is not present. Similar brooches from Roman Britain are located in the British Museum (Brailsford 1964: 20, fig. 11.36).

Object 2424 (fig. 13.29:2) is a fragment of a bronze brooch with the pin still in place, of the type that may have originally existed on Object 1185. Because of the damaged state of the piece, it is not possible to discern its original shape, although a flat foil-like disc is most likely. The diameter across the two curved edges is 3.6 cm. Corrosion obscures any design on the face.

Table 13.14 Brooches.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
1185	B4:59	13	bronze	W 3 cm	crescent shape
1361	F.12:5	—	bronze; gilt glass	W 3.5; H 3.0	DAJ; parallels from Roman Britain
2424	F.28:15	—	bronze	dia 3.6	flat, foil-like disc

Figure 13.28 Hairpins.

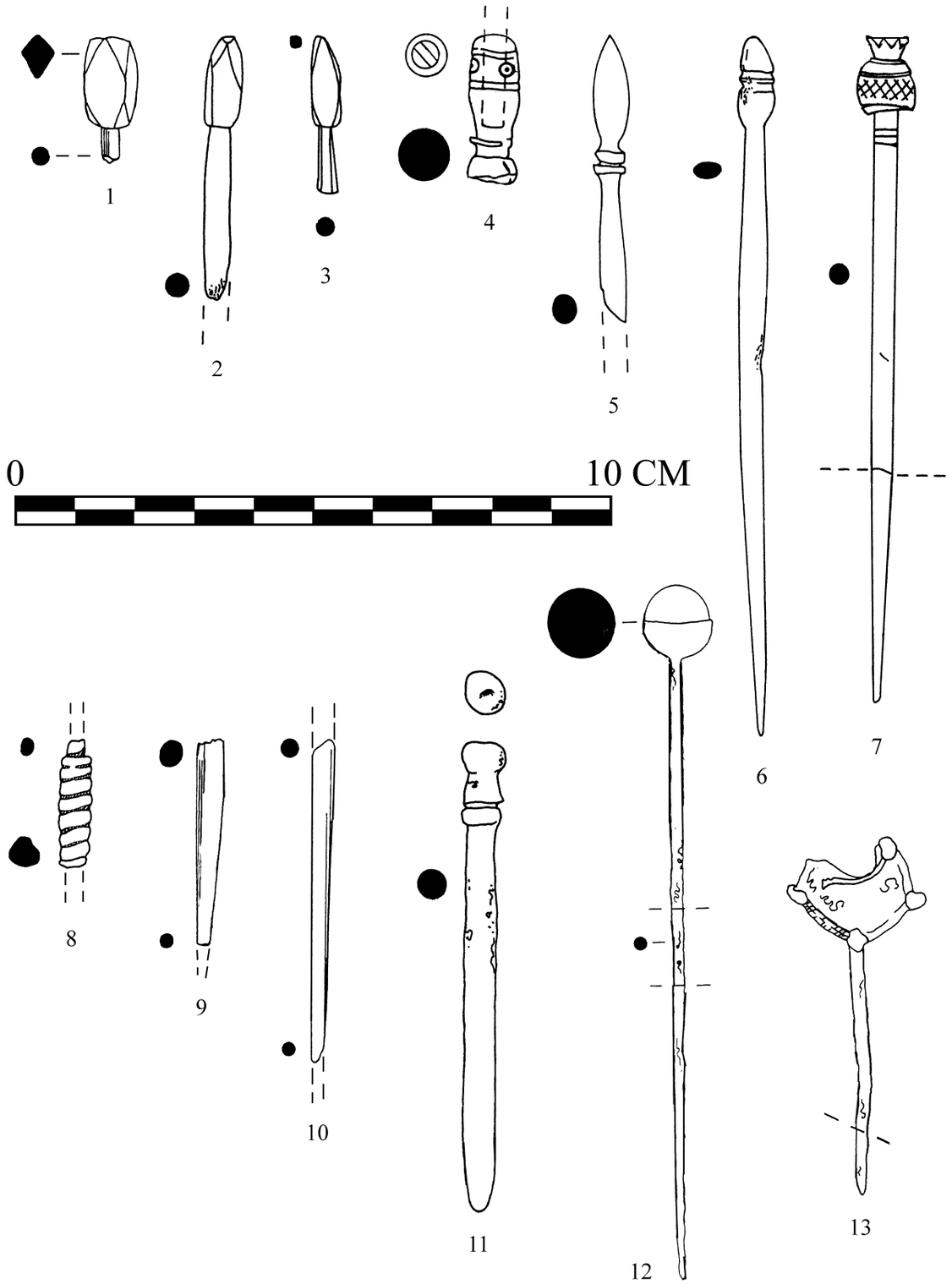
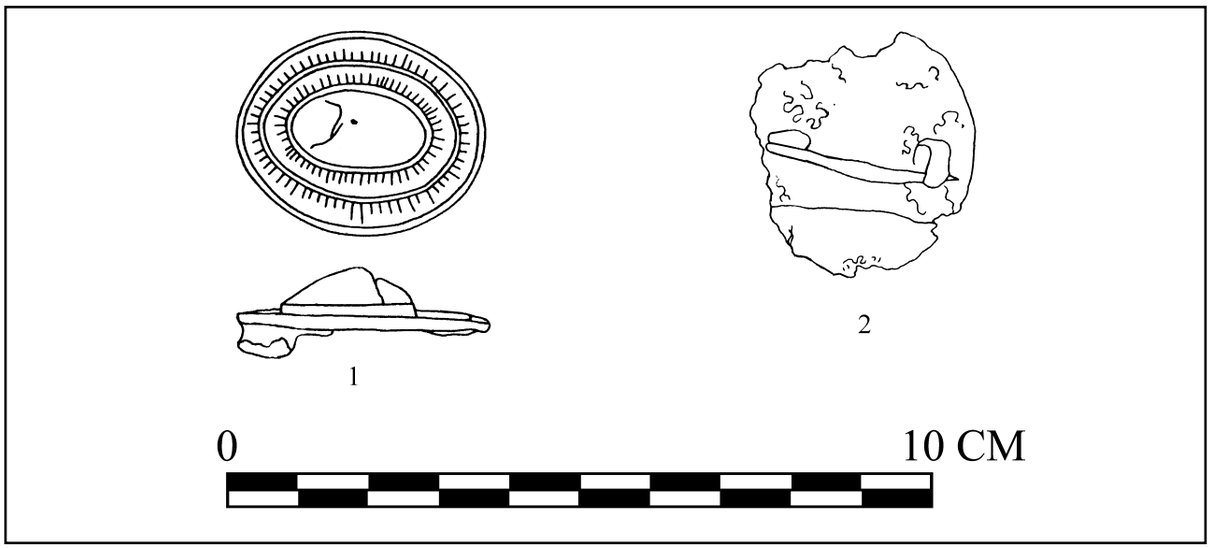


Figure 13.29 Brooches.



Note

[1]Editors Note: Unfortunately the shells were never identified by a professional biologist. The editor has attempted identification on the basis of their shape.

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Chapter Fourteen

MISCELLANEOUS OBJECTS FROM TELL HESBAN AND VICINITY

Marie-Louise Vollenweider and Elizabeth E. Platt

Chapter Fourteen

Miscellaneous Objects From Tell Hesban and Vicinity

Introduction

The objects in this chapter include artifacts that can either be placed under more than one category or do not fit comfortably in any of them. The intaglio might justifiably be considered a seal, but was set apart far separate treatment due to its motif and its appearance on a gemstone. Likewise, while amulets, bells and crosses might be considered objects of jewelry, they also function in religious contexts and are so treated here. The remaining artifacts seem to defy a single categorization. The analysis of the intaglio was made by Vollenweider, and of the remaining objects by Platt.

Intaglio

Object 649 is a carnelian carved into a cameo, measuring 1.53 cm long by 1.22 cm wide, and 1.43 cm thick. The engraving of this gemstone (Object 649; now located in the Dept. of Antiquities), which was found in loculus 1 of Tomb F6 at Hesban, shows a group of three divinities (pl. 14.1). The central figure of the piece is Zeus, who is seated on a throne, the back of which is indicated by a vertical line. He is facing left and leaning on an upright scepter in his right hand. His extended left hand holds a *patera* which is rendered in a summary groove style. Behind him stands the goddess Fortuna draped with a long *chiton*. She carries a cornucopia adorned by a lotus flower and in her right hand she holds a rudder. Before Zeus, a young god, who seems to be nude, is holding an object, which is not readily distinguishable. If it is a whip, then he should be Sol or Helios, from whose other hand a falling *chlamys* would be held. If this is the case, then Sol-Helios or Mercury-Hermes is offering a crown to Zeus. A parallel, with Mercury crowning Fortuna, can be found in Gramatopol (1974: 138, no. 248; cf. Hamburger 1968: 7, pls. 1.19, 2.26).

The Capitoline Triad is a motif often represented on gems (Krug 1971: pl. 3.59, no. 2459; Dimitrova-Milceva 1980: no.14), and their images also appear at about 100 B.C. on the coins of Cornelius Blasio (Sydenham 1952: pl. 19, no. 561E). In later times, the enthroned Zeus is surrounded by other divinities, Fortuna being one of his most frequent companions (Richter 1956, no. 252; Walters 1926: pl. 23; no. 1776; Chiesa 1966: no. 38); though there are still other variations (Furtwängler 1900: nos. 2545, 7155-56; Zwierlein-Diehl 1979: 2, nos. 1190-91). Most of these representations are from the third century A.D.

Parallels to the summary style of the engraving can be found on a red jasper ring stone in The Hague (Maaskant-Kleibrink 1978: no. 969) as well as the coarse engraving of the legs rendered as grooves on the Eros and the sitting Athena in Maaskant-Kleibrink (1978: nos. 986 and 988). These objects probably also belong to the first half of the third century A.D.

The Hesban intaglio, which displays the Triad of Zeus, Mercury and Fortuna seems to reflect others from the Early Roman period (63 B.C.- A.D. 135) as opposed to those of the Late Roman/ Byzantine period (3rd century A.D.) when these other variations were in vogue. This is consistent with the contents of Tomb F6, which belongs to the Early Roman period.

Plate 14.1 Intaglio (Object 649).

Table 14.1 Amulets.

Object No.	Locus	Stratum	Material	Type	Dimensions	Remarks
152	B.1:15	15/16	green frit	Bes	L 2.06 cm	DAJ
622	F.6:2	—	green frit	Horus, the child	L 2.05 cm	—
1556	F.18:13	—	blue frit	phallus	L 1.05 cm	DAJ
1913	D.2:93	13	bone	?	L 2.1 cm	stylized fist ?
1914	D.2:93	13	bone	?	L 1.7 cm	DAJ; rectangle with "x"
1915	D.2:93	13	bone	seed vessel	L 1.8 cm	—
1916	D.2:93	13	bone	seed vessel	L 2.0 cm	DAJ
1917	D.2:93	13	stone-like	fist	L 1.7 cm	DAJ
2009	B.4:273	13	bone	palm column ?	L 1.8 cm	—
2489	F.31:11	—	crystal	forehead	L 2.0 cm	DAJ; teardrop shape

Religious Artifacts

While amulets, bells and crosses can function as jewelry when suspended from an artifact such as a necklace, they can also function as apotropaic and religious objects, and as such are treated here separately.

Amulets

Amulets (Table 14.1) are trinkets which are thought to magically ward off evil or disease, and are usually pierced with a suspension hole so they can be worn around the neck.

Objects 152 and 622 are amulets or small figurines made of frit. Object 152 (fig. 14.1:1) represents the Egyptian god Bes. It was probably made in a mold and afterwards shaped with a tool to have more precise delineations. The surface color is 10GB/2 "(very pale) green" flecked with brown. A chip shows a greyish-white color underneath. There is a deep "V" in front, covering two-thirds of the body. Its measurements are 2.06 cm long, 0.9 cm across the shoulder area, and 0.76 cm at its thickest point. The suspension perforation through the neck is 0.162 cm wide. Object 622 (fig. 14.1:2) is another Egyptian god, the standing Child Horus. It may also have been mold-made, as the features are indistinct. The 5G6/2 "(pale) green" surface has portions that still retain a shiny look, although most of it is weathered. It measures 2.05 cm in length, 0.7 cm at its widest part, and is 0.44 cm thick. The perforation in the back area measures 0.09 cm. Egyptian parallels can be found in Petrie (1914: 34, pl. 26.145:w, x).

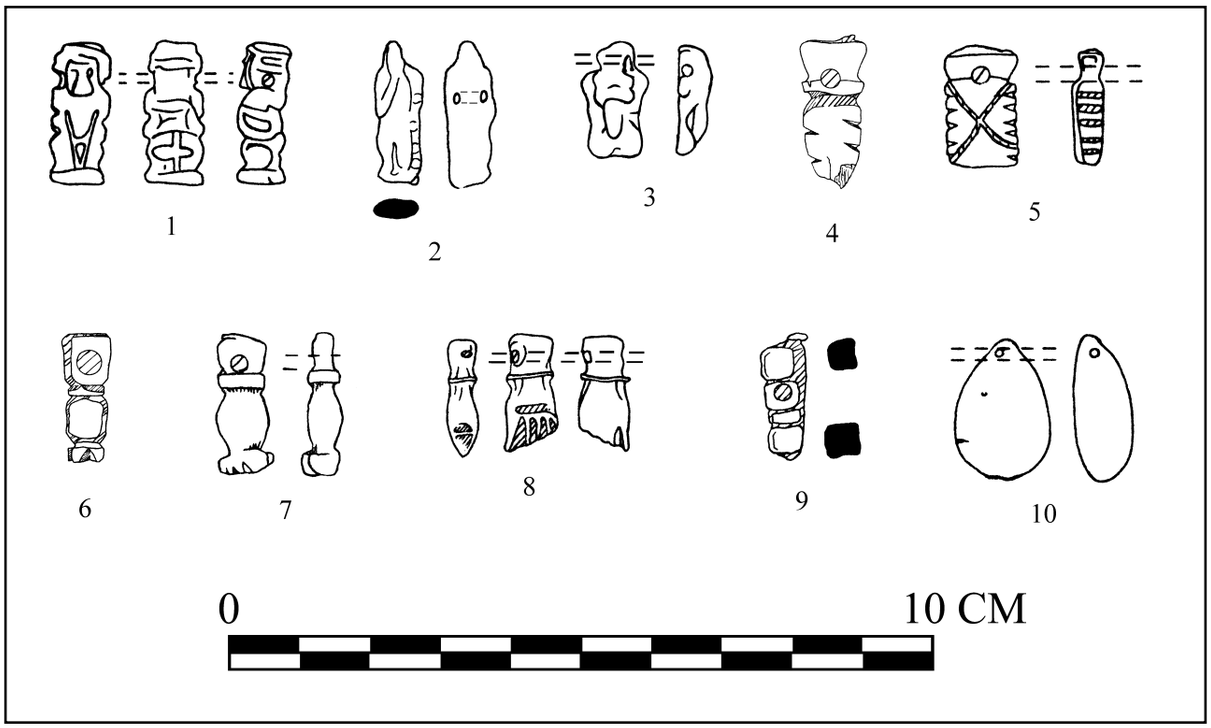
Object 1556 (fig. 14.1:3) is a frit phallus, made in a mold with distinct features. The color is nearest to 5B7/6 "(light) blue." The object length is 1.5 cm; with a width of 1.0 cm. The perforation is a loop at the top of the amulet. See Petrie (1914: 11, pls. 1.16:c-e) and Rudolph and Rudolph (1973: 30, pl. 34.4) for parallels.

Objects 1913-1917 (fig. 14.1:4-8) are five amulets that were found together in Stratum 13, locus D.2:93. Object 1913 is a carved bone amulet of unknown type. The upper part of the rectangular section, containing the evenly perforated suspension hole, may have had another segment above it, which is now broken off. The collar carved below it leads to a small neck, pronounced shoulders and a tapered body. Hatch engravings (three on the one side and two on the other) mark the body. It measures 2.1 cm long by 0.7 cm at its widest.

Object 1914 is a carved, 0.41 cm thick, bone pendant whose upper area with suspension hole is a slightly rectangular arch. The body itself is rectangular with serrated outer edges. Across both sides is a large carved "X" dividing the space into four triangles. It may have functioned as an earring pendant or a bead; see Petrie (1927: 14, pl. 10.250) and Barag (1978: 42, 46, fig. 18.136) for parallels.

Objects 1915 and 1916 appear to be crude versions of lotus-seed vessels (cf. Petrie 1914: 51, no. 271). Object 1915 is a carved bone pendant with rectangular top portion, perforated with a suspension hole. Below is a small collar, with a longer

Figure 14.1 Amulets.



plain section and "foot" area, with wedge-like cutouts. It measures 1.8 cm by 0.6 cm by 0.2 cm. Object 1916 is a similar pendant, with a carved, rounded portion and hacked foot area.

Object 1917 is a fist pendant of a dark stone-like material (10YR22 "dusky yellowish brown"). The design is that of a stylized hand and wrist, with fingers folded up across the palm, measuring 1.7 cm in length, 0.73 cm in width, and 0.4 cm thick. Four fingers and a thumb are indicated on the side by a ridge. The tip of the thumb appears to be inserted between the first and second fingers and a bangle bracelet is indicated at the wrist. Parallels have been found at the Ain el-Helwe cemetery at Sidon (Jidejian 1971: figs. 141-43), Delos (Boccard 1938: pl. 101.890) and elsewhere (Rudolph and Rudolph 1973: 30, pl. 34).

Object 2009 (fig. 14.1:9) is a bone fragment, rectangular in shape, two sides of which are carved with a series of straight lines, making a kind of baluster effect. A hole pierces one carved side and one plain side. The top and bottom of the piece appear to have rough edges from broken parts. If this object is indeed an amulet, it might be a palm column. See Petrie (1914: 50, pl. 43.268) for a comparable object.

Object 2489 (fig. 14.1:10) is a teardrop-shaped pendant of clear, translucent crystal, measuring 2.0 cm in length, 1.3 cm in width, and is 0.85 cm thick. The perforation at the top is 0.14 cm. It is possibly a "forehead pendant," the purpose of which was to avert the evil eye.

Bells

Bells (Table 14.2) were used in religious contexts to announce services, deaths, funerals or the end of something as well as to frighten spirits (cf. Harding 1950: 89 and Colledge 1976: 151). Small pellet bells were also used to adorn the vestments of priests. All of the bells found at Hesban were made of bronze. They appear in a few basic shapes.

Objects 48 and 2235 (fig. 14.2:1-2) are both spherical in shape. Object 48 is a spherical bronze bell about 2.5 cm high, its rattle missing. A ridge, indented from the inside out, divides the object in half. For suspension, a small ring, now fragmented, is on top. Two ovoid holes pierce the bell from the

Table 14.2 Bronze Bells.

Object No.	Locus	Stratum	Dimensions	Remarks
48	D.2:1	1	H 2.5 cm; dia 2.2 cm	"jingle bell"
92	C.1:5	3	3.5 x 3.5	A-shaped
579	C.5:1	2	4.5 x 3.5	teardrop-shaped; rattle intact
790	C.5:2	3	4.9 x 3.7	A-shaped
1068	F.10:6	—	4.2 x 3.0	A-shaped
1222	F.1:8	—	1.5 x 1.7	hemispherical
1555	F.18:13	—	1.85 x 1.6	A-shaped with clapper
1605	F.18:21	—	1.1 x 1.1	hemispherical; corroded
2235	A.8:14	1- 2	1.2 x .4	small, spherical
2857	F.38:3	—	1.5 x 2.2	hemispherical

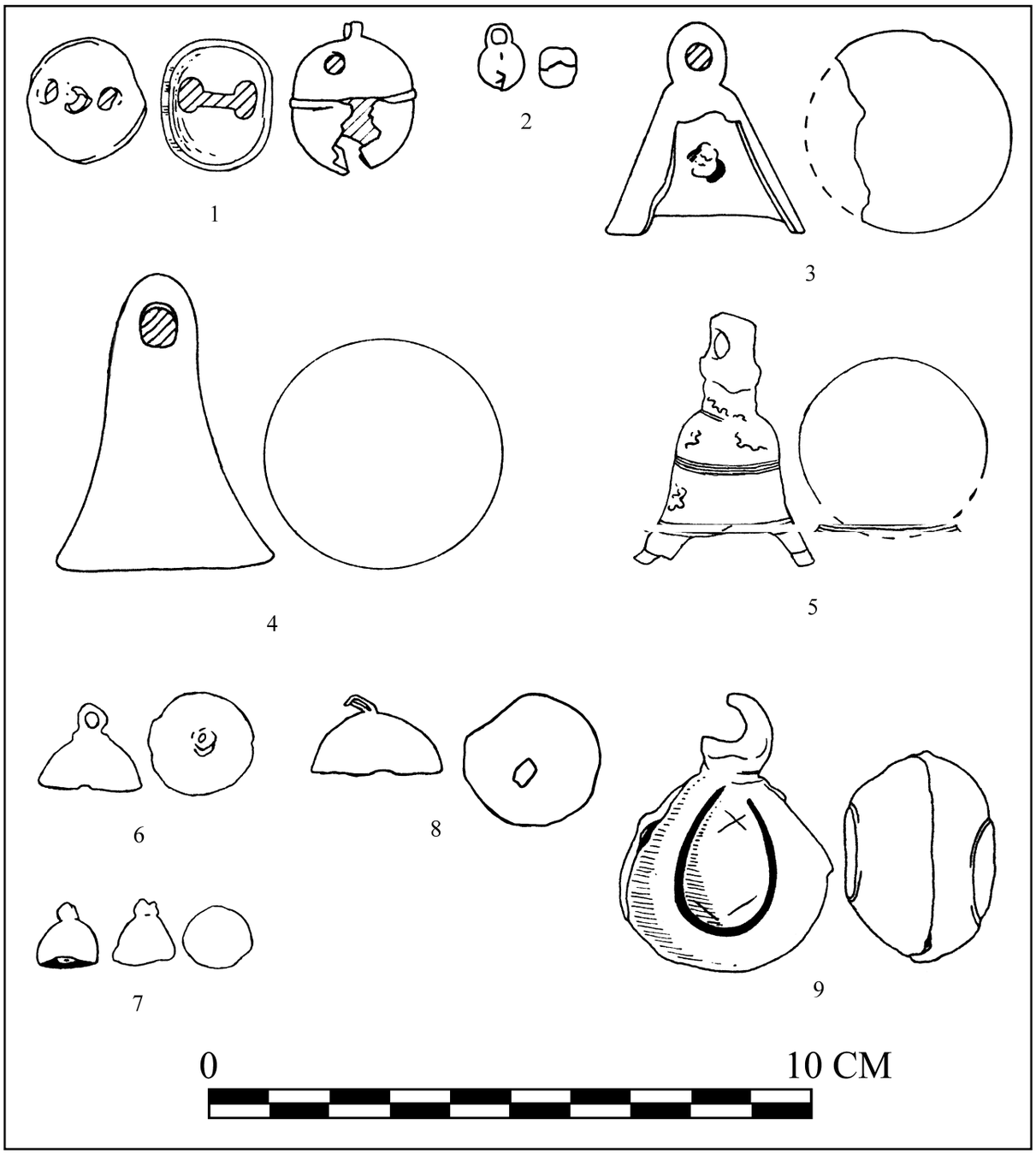
outside. Two other holes, now obscured by the fragmentation, probably perforated the bottom segment with a rectangular space between them. Object 2235 is a small bronze, spherical pendant 1.2 cm high, with a suspension ring 0.2 cm in diameter. Its clapper or rattle was not found.

Objects 92, 790, 1068 and 1555 are basic "A"-shaped bells. Object 92 (fig. 14.2:3) is an "A"-shaped bronze bell about 3.9 cm high, with its clapper missing. A large portion of the bell skirt has been cut out and there is no apparent decoration on the remainder. The suspension ring is 1.0 cm high; the original diameter of the bottom edge was probably 3.5 cm. Object 790 (fig. 14.2:4) is an "A"-shaped bronze bell with a slight flair at the lower edge. Its height is 4.9 cm. The suspension ring, 1.6 cm high at the top, appears to be formed of the same metal piece as the bell. A hole at the base of the ring indicates the manner by which the clapper was attached. The diameter at the lower edge of the bell is 3.7 cm. A parallel exists from Tomb 73A at the Cellarka cemetery at Salamis, on Cyprus (Karageorghis 1970: pl. 242.2), although it is much earlier in date.

Object 1068 (fig. 14.2:5) is an another "A"-shaped bronze bell, 4.2 cm high, with a lower edge diameter of 3.0 cm. The suspension perforation is set in an angular bridge. A deep oval collar forms its base. Two narrow rings outline a delicate neck. From this point the bell proper begins to slope gently into a shoulder ridge. Three incised bands are located just below the shoulder with a second set beginning 0.9 cm below. At the lower ridge of the second set, the flair begins and extends about 0.35 cm to a final band around the edge, measuring 0.2 cm in width. This band looks as if a small layer of the metal has been removed or at least hammered to make an indented area. What remains of its iron clapper may be in the corroded mass inside the top of the bell. A comparison close in shape and time comes from a tomb at Tarshiha (Iliffe 1933: 13, pl. 7. 13), dated to the late fourth century A.D. Object 1555 is a small "A"-shaped bronze bell, 1.85 cm high and 1.6 cm in diameter at the lower edge. There is a small ring at the top of the "A" for suspension. The clapper, apparently made of iron, is corroded and adheres to the inside of the bell, obscuring any decoration.

Objects 1222, 1605 and 2857 (fig. 14.2:6-8) are hemispherical in shape. Object 1222 is a small hemispherical bronze bell, 1.5 cm high, including the 0.3 cm suspension loop. The diameter of the lower edge of the bell is 1.7 cm. A perforation was made in the top of the hemisphere for a loop of metal by which the clapper is attached and forms the suspension ring on the outside. There are a couple of ridges at the base of the bell. Object 1605 is a small, elongated, hemispherical, bronze bell, 1.1 cm high. The diameter of the lower edge also measures 1.1 cm. Corrosion obscures any markings, the shape of the suspension ring and the clapper. Object 2857 is a another small hemispherical bronze bell. The suspension loop, a flat piece of metal 0.3 cm wide, reaches through a perforation in the top of the hemisphere to form a ring for the attachment of the clapper underneath. The bell is 1.5 cm high and the diameter of the now fragmented lower edge of the hemisphere is 2.2 cm.

Figure 14.2 Bells.



Parallels to these hemispherical-shaped bells from Hesban have been found at Salamis, on Cyprus (Chavane 1975: 148, pl. 43.423-24; 442), Amman (Harding 1950: pl. 28.266-67, 279), and Jerusalem (Hamilton and Husseini 1935: pl. 81.8, 18).

Object 579 (fig. 14.2:9) is a weighty bronze bell, 4.5 cm high, 3.5 cm wide, with its rattle intact.

Table 14.3 Crosses.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
832	C.4:53	6	bronze	L 3.65 cm	—
888	C.5:4	3	bronze	L 6.9 cm	DAJ

It is ovoid in shape, rather like a small pair of castanets or two rounded human palms. A slit halfway up each side bisects the bottom section. Indented decorations follow the general teardrop shape on either side of the body. Engraved lines decorate both teardrops. The suspension ring is fragmented but appears to have a simple ovoid perforation set in a collar.

Crosses

Crosses (Table 14.3) have been used as objects and symbols, religious or otherwise, both before and during the Christian Era, reflecting simple marks of identification or possession as well as belief and worship.

Object 832 (fig. 14.3:1) is an bronze cross-shaped object measuring 3.65 cm in length with rings attached to lobes on both ends of the vertical piece. The rings are 0.6 cm in diameter. Each of the four rounded arms of the cross has a series of concentric circles (a center dot and two engraved rings). In the center of the cross is an engraved "X" that acts to emphasize the cruciform nature of the piece. One of the lobes of the vertical piece is larger than the others. The artfact was found in an infant burial near an completely oxidized iron object and had cloth fragments attached. An elegant gold Byzantine cross with circular medallions of the four evangelists at the ends, dating from the seventh-eighth century A.D. (Amandry 1953, pl. 5.44) is somewhat similar (cf. Ross 1965: 7, 21, pls. 10B; 23.15).

Figure 14.3 Crosses.

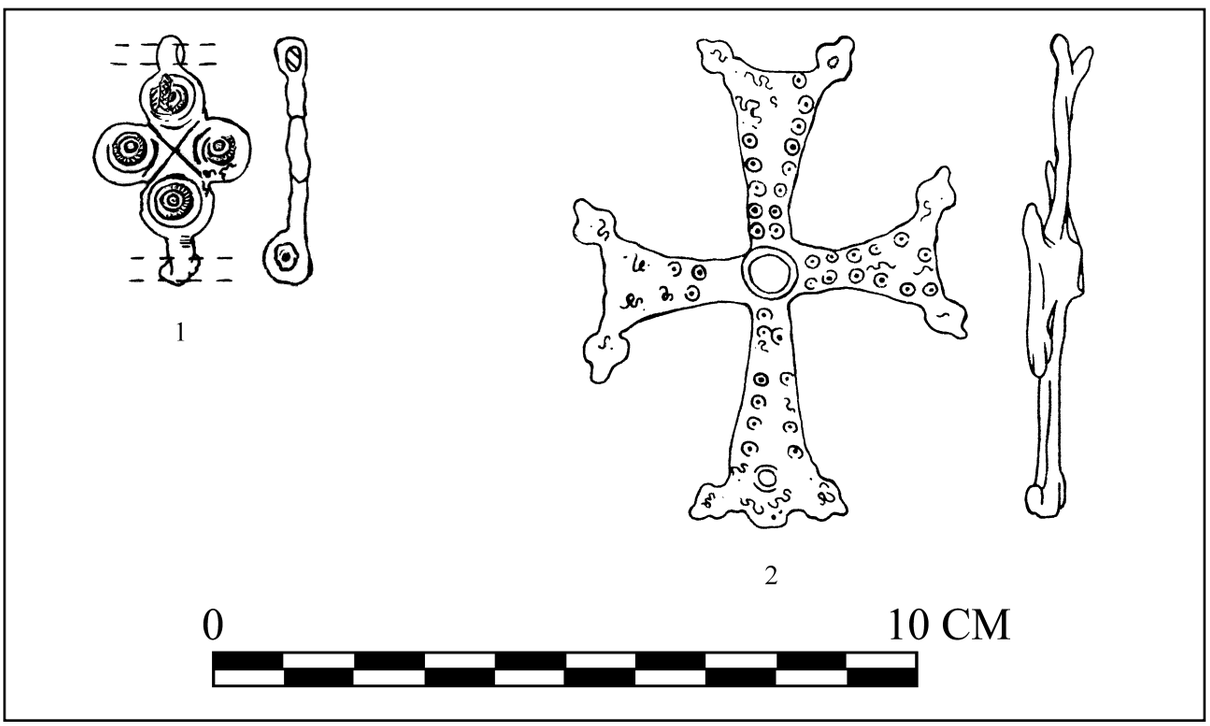


Table 14.4 Varia.

Object No.	Locus	Stratum	Material	Dimensions	Remarks
40	C.1:4	3	bone	—	DAJ; possibly a frag. of a cosmetic applicator
74	C.1:5	3	bone	L 6 cm; W 1.7 cm	DAJ; doll's head; cf. comparisons
102	C.1:5	3	bone	ca. 3.95 x 1.34 cm	frag., part of an inlay; patterns of ring-&-dot designs
218	C.3:4	2	stone	4.37 x 3.65 x .67 cm	concave area suggests a cosmetic palette
362	B.4:1	2	bronze	L 3.7 cm; Th13 cm	slender pin; corroded in head area
745	F.4:5	—	bronze	ca. 4 x 1.06 x 2.06 x .44 cm	2 metal frag. pieces; 1 tubular, the inside of which has a paste-like material; bronze foil, very wavy
819	A.5:17	9	limestone	L 2.9 x 1.76	frag.; tubular shape
1128	B.4:59	13	bone	?	DAJ; comb frags.
1179	F.10:4	—	bronze	3.5 cm	2 wire frags.
1303	C.2:16	?	ivory	L 7.96; W 1.21	DAJ; frag. of "eraser" end of a stylus?
1304	D.3:22	?	ivory	L 9.7; W 1.5; Th .52	frag., flat back; ridges on both pieces; inlay?
1828	C.7:1	2	bronze	L 1.9; W .5 cm	frag.; small metal pieces
2466	C.5:113	3	ivory	L 3.87; W 1.67; Th .89	carved frag. highly polished; part of a cosmetic applicator? pointed tip, "x" engraved
2495	F.31:8	—	bone	L 6.34; W 1.02	lathe-carved baluster frag. of a cosmetic applicator?
2619	C.5:149	3	bone	3.9 x 2.2 x .3	frag.; teeth carved in one edge suggests a comb
2692	F.27:25	—	bronze	1.43 & 1.55	part of a locking hook for a cosmetic box?
2862	G.14:39	—	bone	L 4.18; W 2.14	DAJ; frag.; ring-&-dot engravings on both sides, teeth carved in one edge? suggest a comb
2900	F.38:12	—	silver	1.5 x .5	frag.; originally a hook for jewelry?

Object 888 (fig. 14.3:2) is a bronze cross measuring 6.9 cm by 5.32 cm, with a distinctive trefoil on each of its eight corner tips. Between the trefoils on each of the arms is a graceful reverse scallop. Each side then curves down toward the intersection, effecting a triangular shape for all four arms. The arms opposite each other are equal. A round perforation for suspension is pierced in the area between the trefoils on one of the longer arms. Ring-and-dot stamps border the arms. At the intersection a round concave indentation probably held a stone. See Petrie (1914: pl. 23.137g), Amandry (1953: 290, pl. 46.241), and Davidson (1952: 258) for possible parallels.

Varia

The remaining artifacts (Table 14.4) in this chapter seem to defy a single categorization and therefore appear here as varia of miscellaneous. Of these, we have chosen only three for comment.

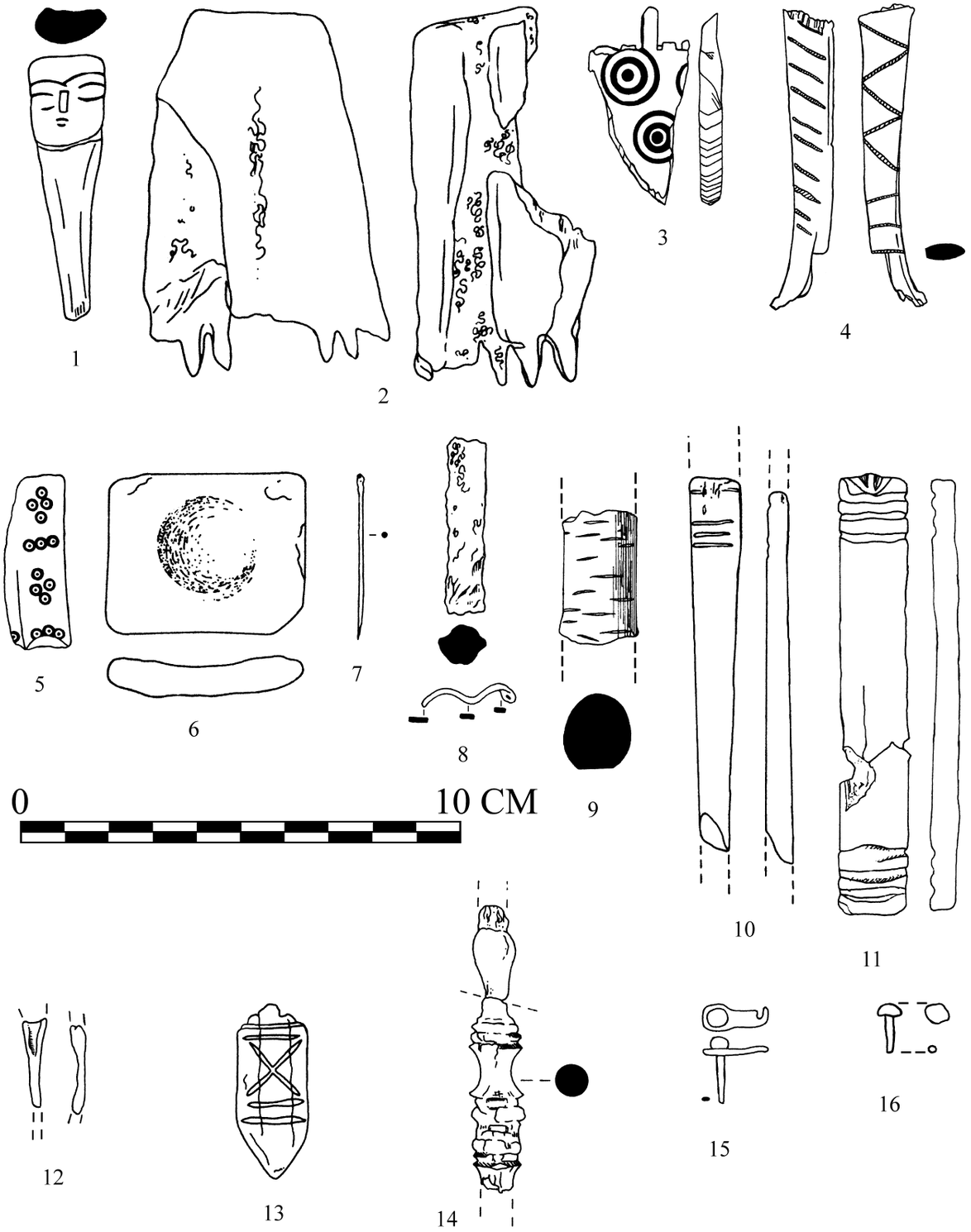
Object 74 (fig. 14.4:1) is a piece of carved bone representing a human head with long neck in stylized form. The piece measures 6.0 cm in length and 1.7 cm at its widest part, in the forehead area. The length of the head is 2.03 cm, while the tip of the "body" narrows to about 0.53 cm in width. Parallels include dolls in Bedawy (1978: 339, fig. 5.42), Stryzygowski (1904: 203, no. 8877) and Rahmani (1981: 76-78, pl. 14D).

Object 1128 (fig. 14.4:2) consists of two fragments of bone objects with teeth that might have been used as combs, perhaps in the textile industry. One of the fragments measures 8.33 cm in length and has three whole teeth, each 1.25 cm long. The underside has a strip of porous (marrow) material. The other fragment measures 7.99 cm long and has two pairs of teeth separated by a space, with the broken teeth varying between 0.91 and 1.38 cm. The reverse side has a honeycomb-like surface.

Object 2862 (fig. 14.4:3) is perhaps also a comb fragment with ring designs. Possible parallels can be found in Petrie (1927: pl. 20.17, 19).

Other miscellaneous artifacts include Objects 40 (fig. 14.4:4), 102 (fig. 14.4:5), 218 (fig. 14.4:6), 362 (fig. 14.4:7), 745 (fig. 14.4:8), 819 (fig. 14.4:9), 1179, 1303 (fig. 14.4:10), 1304 (fig. 14.4:11), 1828 (fig. 14.4:12), 2466 (fig. 14.4:13), 2495 (fig. 14.4:14), 2619, 2692 (fig. 14.4:15), and 2900 (fig. 14.4:16).

Figure 14.4 Varia.



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Chapter Fifteen

THE COINS FROM THE EXCAVATIONS AT HESBAN

Abraham Terian

Chapter Fifteen

The Coins from the Excavations at Hesban

Introduction

Among the "small finds" of an excavation, coins are important for helping provide requisite chronological information. As they are not far removed from their approximate dates, coins discovered in a stratigraphical excavation help date other finds within their strata. There are relatively few inconsistencies due to lengthy circulation on the one hand and occasional disturbances of strata on the other. Meanwhile, wear and corrosion add to the problems of identification, which is indeed the basis of interpretation.

Four hundred and three of the coins found during the excavations at Hesban are presented here.

CATALOGUE OF COINS

Ptolemaic:

1. 2050 (DAJ - D.3:93). Ptolemy III, 246-221 B.C.
   Obverse: Head of Zeus Ammon right.
   Reverse: Two eagles on thunderbolts, facing left; inscription left: [ΠΤΟΛΕΜ] ΑΙΟΥ; right: obliterated [ΒΑΣΛΕΩΣ]; between legs of eagle on left: θ; border of dots.
   Bronze; 40.00 mm.

2. 2477 (DAJ - D.3:108). Ptolemy III, 246-221 B.C. Similar to the preceding coin, but one eagle on reverse; between legs: Δ. Bronze; 28.50 mm.

3. 2473 (HAM 76.0264 - G.11:11). Ptolemy III, 246-221 B.C.?
   Obverse: Head of Alexander the Great, right.
   Reverse: Eagle on thunderbolt, facing left, wings open; between legs: Δ; obliterated inscription on left and right.
   Bronze; 23.12 mm; 12.59 gr.

Seleucid:

4. 2674 (DAJ - G.15:1). Antiochus VIII, 121-96 B.C.
   Obverse: Head of Antiochus right, radiate.
   Reverse: Eagle, facing left, wings closed, scepter over right shoulder; inscription right: [ΒΑ]ΣΙΛ[ΕΩΣ] / ΑΝΤΙΟΧΟΥ; left: [ΕΠ]ΙΦΑΝΟΥΣ; obliterated exergue.
   Bronze; 18.00 mm.

Phoenician:

5. 291 (pl. 15.1) (DAJ - A. 4:18). Tyre 96/5 B.C.
   Obverse: Head of Tyche right, wearing turreted crown with veil; border of dots.
   Reverse: War-galley with both ends curved in a volute; between ends of galley: IEPAΣ; above: ΑΛ (year 30), ק Y (monogram); beneath galley: לצר. The second era of Tyre's autonomy began after the assassination of Demetrius Nicator in 126/5 B.C. (Hill 1910: 125: 255-56).
   Bronze.

Plate 15.1 Coin 291.

6. 1644 (HAM 73.0328 - B.4:88). Tyre 96/5 B.C. Similar to the preceding coin. Bronze; 19.44 mm; 4.30 gr.

7. 1768 (DAJ - B.4:211). Tyre A.D. 64-109.
   Obverse: similar to coin no. 5.

Reverse: Palm tree with two bunches of fruit; obliterated inscription in the field. (Hill 1910: 258-59).
Bronze; 18.00 mm.

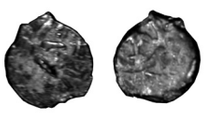
Maccabean:

8. 1015 (HAM 71.0599 - C.1:45). Alexander Jannaeus, 103-76 B.C.
Obverse: Obliterated.
Reverse: Traces of a circle, anchor within.
Bronze; 14.37 mm; 0.63 gr.

9. 1090 (HAM 71.0619 - D.6:33E). Alexander Jannaeus? 103-76 B.C. Similar to the preceeding coin, but in poorer condition. Bronze; 14.00 mm; 1.14 gr.

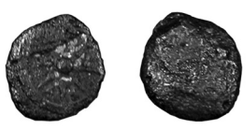
10. 1515 (pl. 15.2) (HAM 73.0230 - A.5:61-62). Alexander Jannaeus, 103-76 B.C. Similar to the preceding coins. Bronze; 13.20 mm; 0.96 gr.

Plate 15.2 Coin 1515.



11. 2480 (pl. 15.3) (HAM 76. 0270 - D.4:92). Alexander Jannaeus, 103-76 B.C. Similar to the preceding coins. Bronze; 14.40 mm; 1.47 gr.

Plate 15.3 Coin 2480.



12. 2671 (DAJ - G.14:8). John Hyrcanus II, 67, 63-40 B.C.
Obverse: Wreath of laurel, within: יהוחנן / הכהן הג/דל וחבר ה/יהודים.
Reifenberg 1965: 40, no. 10 has ה of line 3 at the beginning of line 4. Such differences are commonplace.
Reverse: Two cornucopias, pomegranate between.
Bronze; 14.00 mm.

13. 1523 (pl. 15.4) (HAM 73.0237 - B.4:124). Antigonus Mattathias, 40-37 B.C.
Obverse: Double cornucopias; around, from left below and between horns: חבר היהד֯ /כהן גד֯/[מתתיה].
Reverse: Ivy wreath; around, from left above: BACIΛEΩC [ANTIΓONOY].
Bronze; 25.06 mm; 13.60 gr.

Plate 15.4 Coin 1523.

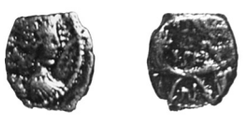
14. 1730 (HAM 74.0078 - C.5:66). Uncertain.
Obverse: Obliterated.
Reverse: Traces of two cornucopias.
Bronze; 13.68 mm; 1.06 gr.

15. 2662 (HAM 76.0428 - D.4:101). Uncertain.
Obverse: Wreath of laurel, obliterated inscription within.
Reverse: Traces of two cornucopias.
Bronze; 14.04 mm; 1.96 gr.

Nabataean:

16. 201 (pl. 15.5) (DAJ - B.1:14). Aretas IV, 9 B.C.-A.D. 40.
Obverse: Busts of Aretas Philopatris (obliterated) and wife; border of dots.
Reverse: Two crossed cornucopias; two lines of inscription between them above, and one line below: חרתת / שקי / לת.
Bronze.

Plate 15.5 Coin 201.



17. 1014 (HAM 71.0598 - C.1:41). Aretas IV, 9 B.C. - A.D. 40. Similar to the preceding coin. Bronze; 15.66 mm; 1.62 gr.

18. 1018 (HAM 71.0602 - C. 4, surface find). Aretas IV, 9 B.C.-A.D. 40. Similar to the preceding coins. Bronze; 15.27 mm; 2.05 gr.

19. 1646 (HAM 73.0329 - B.3:72). Aretas IV, 9 B.C. - A.D. 40. Similar to the preceding coins. Bronze; 17.80 mm; 3.45 gr.

20. 1645 (pl. 15.6) (DAJ - B.4:120E). Aretas IV, 9 B.C. - A.D. 40. Similar to the preceding coins. Bronze; 16.00 mm.

Plate 15.6 Coin 1645.

21. 1650 (HAM 73.0332 - Tomb F.18:8, western half of the chamber to the floor). Aretas IV, 9 B.C. - A.D. 40. Similar to the preceding coins. Bronze; 15.74 mm; 1.81 gr.

22. 1651 (HAM 73.0333 - Tomb F.18:8, western half of the chamber to the floor). Aretas IV, 9 B.C.-A.D. 40.Similar to the preceding coins. Bronze; 19.07 mm; 3.83 gr.

23. 1652 (HAM 73.0334 - Tomb F.18:8, western half of the chamber to the floor). Aretas IV, 9 B.C.-A.D. 40.Similar to the preceding coins. Bronze; 16.19 mm; 1.92 gr.

24. 1653 (DAJ - Tomb F.18:8, western half of the chamber to the floor). Aretas IV, 9 B.C.-A.D. 40. Similar to the preceding coins. Bronze; 15.00 mm.

25. 1654 (DAJ - Tomb F.18:8, western half of the chamber to the floor). Aretas IV, 9 B.C.-A.D. 40. Similar to the preceding coins. Bronze; 19.00 mm.

26. 1655 (HAM 73.0335 - Tomb F.18:8, western half of the chamber to the floor). Aretas IV, 9 B.C.-A.D. 40. Similar to the preceding coins. Bronze; 17.35 mm; 2.92 gr.

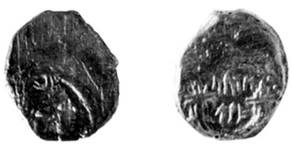
27. 1947 (pl. 15.7) (HAM 74.0272 - C.6:15). Aretas IV, 9 B.C.-A.D. 40. Similar to coin no. 16, but third line of reverse inscription off the flan. Bronze; 16.50 mm; 3.75 gr.

Plate 15.7 Coin 1947.

28. 1739 (HAM 74.0085 - D.3:67). Aretas IV, 9 B.C.-A.D. 40. Similar to the preceding coins, but reverse inscription obliterated. Copper; 16.54 mm; 3.62 gr.

29. 1805 (pl. 15.8) (DAJ - D.3:80). Aretas IV, 9 B.C.-A.D. 40. Similar to the preceding coins, but third line of reverse inscription off the flan. Bronze; 18.00 mm.

Plate 15.8 Coin 1805.



30. 2317 (pl. 15.9) (HAM 76.0132 - D.4:69). Aretas IV, 9 B.C.-A.D. 40. Similar to the preceding coins. Bronze; 18.55 mm; 4.51 gr.

Plate 15.9 Coin 2317.

31. 2474 (HAM 76.0265 - C.9:3). Aretas IV, 9 B.C.-A.D. 40. Similar to the preceding coins. Bronze; 17.83 mm; 3.59 gr.

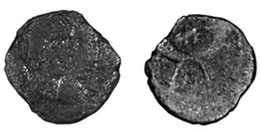
32. 2871 (pl. 15.10) (HAM 76.0612 - C.9:38). Aretas IV, 9 B.C.-A.D. 40. Similar to the preceding coins. Bronze; 16.96 mm; 3.07 gr.

Plate 15.10 Coin 2871.

33. 1740 (HAM 74.0086 - D.3:57C, cistern). Aretas IV, 9 B.C.-A.D. 40.
Obverse: Bust of Aretas Philopatris right, laureate, with long hair; border of dots.
Reverse: Two crossed cornucopias; one or two unintelligible letters between them.
Bronze; 14.05 mm; 2.30 gr.

34. 2669 (pl. 15.11) (HAM 76.0434 - B.7:35). Malichus II, A.D. 40-70.
Obverse: Jugate heads of Malichus II and wife; hair hanging down; obliterated field.
Reverse: Two crossed cornucoopias; two lines of inscription between them above, and one line below: מלכו /שקי / לת.
Bronze; 15.03 mm; 1.56 gr.

Plate 15.11 Coin 2669.



35. 134 (DAJ - C.2: 6). Rabbel II, A.D. 71-106.
Obverse: Obliterated
Reverse: Two crossed cornucopias; two lines of inscription between them: גמלת / רבאל.
Bronze; 16.00 mm.

36. 1102 (HAM 71.0790 - B.4:43). Rabbel II, A.D. 71-106.
Obverse: Head of Rabbel right, laureate, with long hair.
Reverse: Similar to the preceding coin.
Bronze; 16.11 mm; 2.62 gr.

37. 2101 (HAM 74.0408 - G.10:14). Rabbel II, A.D. 71- 106.
Obverse: Busts of Rabbel and Gamilath (his sister and queen) right.
Reverse: Similar to the preceding coins.
Bronze; 15.66; 2.17 gr.

38. 2663 (HAM 76.0429 - D.4:107). Rabbel II, A.D. 71-106.
Obverse: Traces of two busts right.
Reverse: Traces of two crossed cornucopias; two lines of inscription between them above, and one line below: אמה / ל... / ...
Bronze; 17.86 mm; 2.38 gr.

39. 2872 (HAM 76.0613 - G.4:33). Rabbel II, A.D. 71-106. Similar to coin no. 37.
Bronze; 16.65 mm; 2.04 gr.

40. 2873 (DAJ - C.8:25). Rabbel II, A.D. 71-106. Similar to the preceding coin. Bronze; 14.00 mm.

41. 2348 (DAJ - C.1:119). Rabbel II, A.D. 71-106. Similar to the preceding coin. Bronze; 17.50 mm.

42. 1528 (pl. 15.12) (HAM 73.0242 - D.1:53). Ruler uncertain.
Obverse: Head right, laureate; border.
Reverse: Horn of plenty right; ear of barley or wheat left, with pomegranate (?) above. Identical with Hill 1922, pl. 49, no. 9, except that the left and right objects on the reverse are reversed, owing perhaps to a printing error in mirror image.
Bronze; 14.25 mm; 1.73 gr.

43. 387 (HAM71.0532 - D.6:5). Ruler uncertain.
Bronze; 13.80 mm; 1.22 gr.

Plate 15.12 Coin 1528.

Greek ?

44. 130 (DAJ - C.2:1). Ruler uncertain.
Obverse: Obliterated.
Reverse: Nude deity right, seated 1eft, conducting serpent beneath to *cista mystica* above with lid half-open; 1eft, illegible Greek inscription outwards. The so-called "serpent type" coinage often denotes a Mysian origin. *cf.* Grose 1929: 42-73. However, its identity with city coins of Arabia is also probable (Hill 1922: 33, n. 6).
Bronze.

Provincial Roman:

Judean:

45. 1118 (DAJ - B.3:28). M. Ambibulus, A.D. 9-12.
Obverse: Ear of barley; traces of border.
Reverse: Palm tree with two bunches of fruit; traces of border.
Bronze; 10.40 mm.

46. 1100 (DAJ - D.5:5). Pontius Pilate A.D. 29/30.
Obverse: Three ears of barley, around: [IOY] ΛΙΑΚΑΙCΑΡΟ[C].
Reverse: Obliterated. Dated to year 16 of Tiberius (cf. Reifenberg 1965: 56, no. 131).
Bronze; 10.61 mm.

47. 1767 (HAM 74.0110 - D.3:78). Judaea; Pontius Pilate, A.D. 30-32.
Obverse: inscription obliterated.
Reverse: obliterated.
Bronze; 15.13 mm; 1.53 gr.

48. 2937 (HAM 76.0673 - C.9:24). Judaea; Pontius Pilate, A.D. 30-32. Similar to the preceding coins; date obliterated. Bronze; 14.69 mm; 1.20 gr.

49. 139 (DAJ - D.1:1). Judaea; Pontius Pilate, A.D. 31/32.
Obverse: Lituus; around: TIBEPIOY KAICAPOC.
Reverse: within wreath: LIH (year 18 of Tiberius' accession, cf. Reifenberg 1965: 56, no. 133).
Bronze.

50. 1524 (pl.15.13) (HAM 73.0238 - D.6W:56B). Judaea; Pontius Pilate, A.D. 31/32. Similar to the preceding coin. Bronze; 15.52 mm; 1.64 gr.

Plate 15.13 Coin 1524.

51. 1647 (pl. 15.14) (HAM 73.0330 - D.2:36). *Denarius* of Trajan, ca. A.D. 105 (Mattingly 1966: 30, n.).
Obverse: Head of Trajan (A.D. 98-117) right, laureate; around: IMP TRAIANO AVG GER DAC P M TR P; plated.
Reverse: Fortuna standing left, draped, holding rudder or prow in right hand and cornucopias in left; around: COS VP P S P Q R OPTIMO PRINC; plated. Referring to the reigns of Nerva to Hadrian, Mattingly (1966: xix). says, "In this period they [plated *denarii*] usually offer irregular combinations of types and other peculiarities, and may be attributed confidently to the work of the false moneyer. We can be certain that they were not issued by the regular mints. It is less certain whether there may not have been irregular local mints in the provinces issuing imitations of imperial coins which might be tolerated ... in general circulation."
Bronze; 18.70 mm; 2.93 gr.

Plate 15.14 Coin 1647.

52. 295 (DAJ - D.1:31). Trajan, ca. A.D. 107.
Obverse: Head of Nerva (A.D. 96-98) right, laureate; 1eft: DIVINERVA; right obliterated. The epithet denotes that this unusual coin was not issued during the reign of Nerva, for it was after his death that the Senate pronounced him *divinus* (Boak and Sinnigen 1965: 323). It must have been have been issued during Trajan's "restoration" of A.D. 107, when "portraits of all the 'divi' and 'good' Emperors, from Julius Caeasur to Nerva" were represented. Caligula, Nero, Otho, Vitellius, and Domitian were excluded. (Mattingly 1966: xxiii). The DIVI legend appears on the reverse of these types minted in Rome—as it also appears on those issued later by Hadrian (A.D. 117-138) (Mattingly 1966: 100-101, 241, 378). The appearance of the legend on the obverse of this coin could be explained by the simple fact that variants of Roman coinage were not uncommon in the provincial mints.
Reverse: Aequitas (or Moneta) standing, draped, holding scales in right hand and cornucopia in 1eft.
Bronze.

53. 1521 (pl. 15.15) (HAM 73.0236 - B.3:49). *Stater* of Caracalla, A.D. 211-217.
Obverse: Head of Caracalla, laureate; around: AYT. KAI. ANTΩNINO (*sic*) CEB; border of dots.
Reverse: Eagle with wings spread, head right, holding wreath in beak, standing on thunderbolt; two stars in field; around: ΔHMAPX. E.Ξ. YΠATOC TO Γ (Gaza?) (Hill 1914: 78), though no such coin is illustrated in the plates; border of dots.
Silver; 27.20 mm; 13.23 gr.

Plate 15.15 Coin 1521.

Aelia Capitolina:

54. 202 (pl. 15.16) (HAM 68.0290 - B.1:14). Aelia Capitolina; Antoninus Pius, A.D. 138. Antoninus Pius became Hadrian's partner in the Principate early in A.D. 138. Like his earlier coins, this was struck prior to Hadrian's death on July 10, A.D. 138.
Obverse: Head of Antoninus Pius right, bareheaded; obliterated inscription around: [IMPCT AEL. ANT].
Reverse: Bust of Serapis right, hatted; inscription begins on right below and reads outwardly: COLAE CAPIT (Colonia Aelia Capitolina); border of dots.
Bronze; 19.38 mm; 6.90 gr.

Plate 15.16 Coin 202.

55. 2479 (pl. 15.17) (HAM 76.0269 - D.4:99). Aelia Capitolina; Antoninus Pius, A.D. 138-161.
Obverse: Similar to the following coin.
Reverse: Bust of Faustina I right, draped; obliterated inscription around.
Copper; 21.47 mm; 7.88 gr.

Plate 15.17 Coin 2479.

56. 1713 (pl. 15.18) (HAM 74.0061 - D.2:44). Aelia Capitolina; joint principate of Antonius Pius and Marcus Aurelius, A.D. 146-161.
Obverse: Bust of Pius (A.D. 138-161) right, bearded, laureate, and draped; obliterated inscription around.
Reverse: Bust of Aurelius (A.D. 161-180) right, bareheaded and draped; around: AVRELIO CAES AVG; in exergue: CA[C] (Colonia Aelia Capitolina). (Hill 1914: 88, nos. 34-35).
Bronze; 20.85 mm; 7.72 gr.

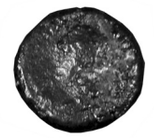
Plate 15.18 Coin 1713.

57. 636 (HAM 71.0654 - Tomb F.6:7, 3rd loculus on south side). Aelia Capitolina; Marcus Aurelius and Lucius Verus, A.D. 161-169.
Obverse: Busts of Aurelius (A.D. 161-180) right and Verus (A.D. 161-169) left, both bearded and laureate; around: IMP CAES ANTONINO ...
Reverse: Temple of Astarte showing four columns, pediment, central arch, and the goddess standing 1eft within, wearing turreted crown and chiton, resting left hand on spear, right hand holding uncertain object, and right bare leg raised on something; COL AEL CAP in exergue (cf. Hill 1914: 89, no. 40).
Bronze; 30.50 mm; 14.16 gr.

Alexandria:

58. 2939 (pl. 15.19) (HAM 76.0675 - G.15:32). Alexandria; Trajan, A.D. 113/14.
Obverse: Traces of head 1eft.
Reverse: Androsphinx right, recumbent; in exergue: LIS.
Bronze; 18.17 mm; 4.15 gr.

Plate 15.19 Coin 2939.



59. 2318 (DAJ - C.8:19). Uncertain. Reminiscent of the coins of Alexandria.
Obverse: Bust of emperor right, laureate and draped; around: ... OCCEBOYC.
Reverse: Bust of Zeus Serapis right, laureate and wearing modius; illegible inscription around.
Bronze; 20.00 mm.

Arabia:

60. 1743 (pl. 15.20) (DAJ - D.4:41). Arabia; Hadrian, A.D. 117-138.
Obverse: Bust of Hadrian right, laureate, undraped; around: [AVTOKPAT KAICAP T] PAIANOC ADPIANOC C; border of dots.
Reverse: Bust of Arabia right, wearing turreted crown and flowing mantle; each arm holding a small seated figure of a child; in exergue: APABIA; traces of border.
Copper; 20.00 mm.

Plate 15.20 Coin 1743.

Caesarea:

61. 2470 (HAM 76.0262 - D.4:99). Caesarea; Hadrian, A.D. 117-138.
Obverse: Bust of Hadrian right, laureate, wearing paludamentum and cuirass; obliterated inscription around.
Reverse: City-goddess standing left, wearing turreted crown, chiton, and mantle; her right foot rests on small figure, left hand rests on spear or standard and the right holds another small figure; around: [CIF AVG] CAESAR.
Bronze; 22.02 mm; 6.67 gr.

62. 2938 (pl. 15.21) (HAM 76.0674 - C.8:54). Caesarea; Marcus Aurelius, under Antoninus Pius, A.D. 138-161.
Obverse: Bust of Aurelius right, bareheaded; inscription around: AV[RELIO CAES ANTON AVG P F].
Reverse: Bust of Serapis right, hatted; inscription around: COL P[RIM...].
Bronze; 23.36 mm; 9.99 gr.

Plate 15.21 Coin 2938.

Petra:

63. 2591 (pl. 15.22) (DAJ - A.10:4). Petra.
Obverse: Bust of Hadrian right, laureate, draped and wearing gorgoneion on breast; around: AYTOKPATWP KAICAP TPAIANOC CEBACTOC.
Reverse: City-goddess seated left on rock, left foot forward, wearing turreted crown, veil, long chiton, and mantle; left hand holding trophy, right extended open; around: ΠETPA MHTPOΠOΛIC. Note the difference in Hill 1922: 34, no. 1, where the drape on the obverse has less pleats and feet on the reverse are brought together.
Bronze; 28.00 mm.

Plate 15.22 Coin 2591.

Philadelphia?:

64. 2668 (DAJ - C.9:14). Philadepphia (?).
Obverse: Bust of Aurelius (?) right, bareheaded, wearing paludamentum and cuirass; obliterated inscription around.
Reverse: Cart with domed canopy supported by four pillars, drawn right by four horses; obliterated inscription above (and in exergue?).
Bronze; 21.2 mm.

Neapolis:

65. 141 (pl. 15.23) (DAJ - C.2:7). Neapolis; Diadumenian, A.D. 217-218.
Obverse: Bust of Diadumenian, bareheaded; around: ... [A]NTONINVS (cf. Hill 1914: 60, where the coins of Diadumenian differ from this specimen in that their obverse inscription is in Greek and the reverse shows a temple with four columns, pediment, and central arch; with city-goddess within).
Reverse: Mount Gerizim showing temple at the summit, steep stairway on right slope, colonnade below, and an eagle (?) at the bottom; obliterated inscription around.
Bronze.

Plate 15.23 Coin 141.

66. 2476 HAM 76.0267 - C.8:11). Neapolis, Diadumenian, A.D. 217-218. Similar to the preceding coin, but in poorer condition.
Bronze; 19.80 mm.

Heshbon:

67. 1522 (pl. 15.24) (DAJ - B.4:113). Esbus (Heshbon); Elagabalus, A.D. 218-222.
Obverse: Bust of Elagabalus right, laureate and draped; around: AVT C M AVR ANTONINVS.

Reverse: Within a temple showing four columns, central arch and flat roof to wings, city-goddess stands left, wearing turreted crown and short chiton; her right foot rests on small figure, left hand rests on spear or standard and the right holds another small figure; inscription above the temple wings: A V; in exergue: ECBOVC (Aurelia Esbus).
Bronze.

Plate 15.24 Coin 1522.

68. 2104 (pl. 15.25) (HAM 74.0411 - B.1:13). Esbus (Heshbon); Elagabalus, A.D. 218-222. Similar to the preceding coin, but in extremely poor condition. With the exception of part of the reverse (exergue: [ECB]OVC), the inscription is obliterated. Bronze; 21.79 mm; 10.06 gr.

Plate 15.25 Coin 2104.

Late Roman:

69. 1224 (pl. 15.26) (DAJ - Tomb F.5:3, Trough 6 of the nothern arcosolium). Philip I, A.D. 243-249 (medallion?).
Obverse: Bust of Philippus Arabus right, bearded, laureate, and draped; around: IMP M IVL PHILIPPVS AVG.
Reverse: Laetitia standing left, holding wreath in left hand and rudder in right hand; around: LAET FVNDATA: SC in the field.
Bronze.

Plate 15.26 Coin 1224.

70. 429 (DAJ - D.6:15). Herennius Etruscus, *ca.* A.D. 250. Son of Decius, A.D. 249-251 (cf. Wroth 1899: 225-26).
Obverse: Bust of Herennius Etruscus right, bareheaded and draped; around EPENN ETPOV MEKV ΔEKIOC KECAP.
Reverse: Eagle perched on palm branch, head left; around: ΔHMAPX EΞOVCIAC; SC in exergue.
Bronze; 20.52 mm.

71. 391 (DAJ - B.2:1, surface find). Valerian I, A.D. 253-260.
Obverse: Bust of Valerian I right, radiate and draped; around: IMP C P LIC VALERIANVS P F AVG.
Reverse: Helmeted Mars standing right with spear, emperor standing left with scepter; obliterated inscription around.
Bronze; 10.90 mm.

72. 1710 (pl. 15.27) (HAM 74.0058 - C.5, bulk trim). Gallienus, A.D. 267.
Obverse: Bust of Gallienus (A.D. 253-268) right, radiate and draped; around: [GA]LLIENV[S ...]; border of dots.
Reverse: Mercury standing left, holding purse and caduceus; around: FIDES A[VG]; in exergue: PXV (Tribunician year [A.D. 267]).
Copper; 21.30 mm; 2.55 gr.

Plate 15.27 Coin 1710.

73. 2319 (pl. 15.28) (HAM 76.0133 - C.7:47). Gallienus, A.D. 253-268.
Obverse: Bust of Galienus right, radiate and draped; around: GALLIENVS P F AVG; border of dots.
Reverse: Soldier standing left, right hand on shield, left hand holding spear; around: VIRTVS AVG; border of dots.
Bronze; 22.58 mm; 3.22 gr.

Plate 15.28 Coin 2319.

74. 2667 (HAM 76.0433 - C.8:13). Diocletian, A.D. 284-305.
Obverse: Bust of Diocletian right, radiate and draped; around: IMP C C V[AL DIOCLET]IANVS P F AVG; pierced.
Reverse: Similar to coin no. 76; obliterated field; pierced.
Bronze; 20.64 mm; 1.43 gr.

75. 1091 (pl. 15.29) (HAM 71.0620 - D.6:33C). Maximian, A.D. 296-305.
Obverse: Bust of Maximian right, radiate and draped; around: MAXIMIANVS NOB CAES.
Reverse: Similar to coin no. 78, but around: CONCORDIA M(IL)I-TVM; in the field: HA (Heraclea).
Bronze; 21.59 mm; 1.72 gr.

Plate 15.29 Coin 1091.

76. 1702 (pl. 15.30) (HAM 74.00053 - A.7:97). Maximian, A.D. 296-305.
Obverse: Bust of Maximian right, radiate and draped; around: IMP C M AV MAXIMIANV[S ...].
Reverse: Emperor standing right, holding *paragonium*, receiving Victory on globe from Jupiter, standing left, holding scepter; around: CONCONCOR[DIA MI]LITVM; in the field: KA (mark of value).
Bronze; 20.93 mm; 3.03 gr.

Plate 15.30 Coin 1702.

77. 2672 (pl. 15.31) (DAJ - C.6:66). Maximian, A.D. 296-305. Similar to the preceding coin; obverse inscription: IMP C M A MAXIMIANVS P F AVG. Bronze; 21.30 mm.

Plate 15.31 Coin 2672.

78. 290 (pl. 15.32) (DAJ - C. 4:5). third century A.D. Ruler uncertain.
Obverse: Bust right, radiate; blundered and illegible inscription around.
Reverse: Concordia standing right, draped and turreted, presenting two ensigns to Sol standing half 1eft, right hand raised to receive ensign, 1eft holding spear; around: CON[CORDIA]AVG; obliterated inscription in segment below.
Bronze.

79. 637 (HAM 71.0575 - F.6:7). Uncertain.
Bronze; 27.19 mm; 11.18 gr.

Plate 15.32 Coin 290.

80. 1103 (HAM 71.0627 - C.1:35). Uncertain.
Bronze; 24.05 mm; 8.01 gr.

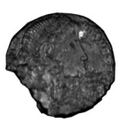
Byzantine:

81. 1731 (pl. 15.33) (DAJ - G.9:2). Constantine I, A.D. 306-337.
Obverse: Bust of Constantine I right, laureate and draped; around: IMP C CONSTANTINVS P F AVG.
Reverse: Three standards; around: S P Q R OPTIMO PRINCIPI.
Bronze; 22.00 mm.

Plate 15.33 Coin 1731.

82. 2875 (pl. 15.34) (HAM 76.0615 - G.14:23) Constantine I, A.D. 307-337.
Obverse: Bust of Constantine I right, wearing wreath, helmet, and cuirass; around: [CONSTA]NTINVS AVG.
Reverse: Obliterated.
Bronze; 15.15 mm; 1.24 gr.

Plate 15.34 Coin 2875.



83. 1225 (HAM 71.0633 - Tomb F.5:3, Trough 6 of the northern arcosolium). Constantine II, A.D. 337-340.
Obverse: Bust of Constantine II right, with pearl-diadem and cuirass; around: CONSTANTINVS IVN NOB C; pierced.
Reverse: Plan of Roman camp, Sol standing in the middle above; 1eft.: VIRT; right: EXERC; beneath: T.S.A. (Thessalonica): pierced.
Bronze.

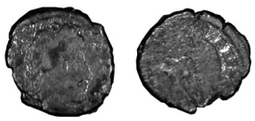
84. 2874 (pl. 15.35) (HAM 76.0614 - F.31:21). Constantius II, A.D. 337-346.
Obverse: Head of Constantius II (A.D. 337-361) right, with pearl-diadem; around: [D N CONS]TANTIVS P F AVG.
Reverse: Inscription within wreath: VOT/XX/MVLT/XXX; obliterated exergue.
Bronze; 15.44 mm; 1.33 gr.

Plate 15.35 Coin 2874.

85. 2315 (HAM 76.0131 - G.11:3). A.D. 346-354.
Obverse: Bust of Constantius II right, with pearl-diadem and cuirass; around: [D N CONSTANT]IVS P F AVG.
Reverse: Soldier advancing left, spearing fallen horseman; upper left field: S; around: FEL TEMP REPARATIO; obliterated exergue.
Bronze; 20.74 mm; 4.65 gr.

86. 2665 (pl. 15.36) (HAM 76.0431 - F.31:13). A.D. 354-361.
Obverse: Similar to the preceding coin.
Reverse: Soldier advancing left, spearing fallen enemy; around: [FEL] TEMP REPA[RATIO]; obliterated exergue.
Bronze; 14.96 mm; 1.86 gr.

Plate 15.36 Coin 2665.



87. 2940 (pl. 15.37) (HAM 76.0676 - C.5:219). Similar to the preceding coin. Bronze; 13.42 mm; 0.65 gr.

Plate 15.37 Coin 2940.

88. 2941 (HAM 76.0677 - G.15:28, pit). Similar to the preceding coin. Bronze; 16.53 mm; 2.01 gr.

89. 1076 (DAJ - A.5:23). Constans 1, A.D. 343-350.
Obverse: Head of Constans I (A.D. 337-350) right, around: CONSTA ....
Reverse: Within wreath: VOT/XX/MVLT/XXX; beneath: SMAN (Antioch).
Bronze; 10.45 mm.

90. 655 (pl. 15.38) (HAM 71.0576 - B.4:6, surface find). Similar to the preceding coin.
Bronze; 13.07 mm; 1.11 gr.

Plate 15.38 Coin 655.

91. 1539 (HAM 73.0250 - B.5:8). Constans I, A.D. 343-350. Similar to coin no. 89. Bronze; 11.12 mm; 1.22 gr.

92. 1736 (pl. 15.39) (HAM 74.0082 - G.5B:31). Valens, A.D. 364-378.
Obverse: Bust of Valens right, with pearl diadem and cuirass; around: D N VALEN ....
Reverse: Emperor advancing right with standard in left hand and dragging a captive with the right; around: GLORIA ROMANORVM.
Bronze; 17.35 mm; 1.34 gr.

Plate 15.39 Coin 1736.

93. 2058 (HAM 74.0371 - G.5F:1). Similar to the preceding coin, but inscription is obliterated. Bronze; 15.36 mm; 3.09 gr.

94. 2666 (HAM 76.0432 - F.34:4D). Valens, A.D. 364-378. Similar to coin no. 92. Bronze; 15.41 mm; 1.50 gr.

95. 2942 (pl. 15.40) (HAM 76.0678 - C.5:217). Similar to the preceding coin. Bronze; 18.11 mm; 2.71 gr.

Plate 15.40 Coin 2942.

96. 115 (DAJ - B.1:4/5). Procopius (?), A.D. 365/66 (*cf.* Pearce 1962: 215, no. 18).
Obverse: Obliterated.
Reverse: Emperor standing, head right, holding *laburnum* in right hand and resting his left hand on shield; around: [RE]PARATIO FELT[EMP].
Bronze.

97. 105 (pl. 15.41) (DAJ - A.1, surface find). Valentinian II, A.D. 375-392.
Obverse: Bust of Valentinian II right; around: DNVALENTINIANVS ....
Reverse: Obliterated.
Bronze.

Plate 15.41 Coin 105.

98. 311 (pl. 15.42) (HAM 68.0244 - C.3:5).
Obverse: Bust of Valentianian II right, with pearl-diadem and cuirass.
Reverse: Emperor advancing right, dragging a captive with a transverse spear; 1eft: PRINCI[PIVM ...].
Bronze; 15.50 mm; 1.52 gr.

Plate 15.42 Coin 311.

99. 537 (pl. 15.43) (HAM 71.0569 - D.5:6). Valentinian II, A.D. 375-392. Similar to the preceding coin. Bronze; 15.83 mm; 2.11 gr.

Plate 15.43 Coin 537.

100. 1525 (HAM 73.239 - D.3:21). Valentinian II, A.D. 375-392. Similar to the preceding coins. Bronze; 14.08 mm; 1.98 gr.

101. 111 (pl. 15.44) (HAM 68.0135 - A.1:14).
Obverse: Bust of Valentinian II right, draped; 1eft: DNVAL ....
Reverse: Cross within wreath. This coin could also be attributed either to Honorius (A.D. 395-423) or to Valentinian III (A.D. 421, 423-455).
Bronze; 12.25 mm; 1.59 gr.

Plate 15.44 Coin 111.

102. 247 (DAJ - B.1:4/5). Valentinian II and Victor (usurper), A.D. 387. Victor was the son of Maximus, a general in Britain who crossed to Gaul in A.D. 383 and assassinated Gratian (A.D. 375-383), the elder brother of Valentinian II. Maximus crossed the Alps in A.D. 387, but was defeated and beheaded by Theodosius I, who had been appointed Eastern Emperor by Gratian and Valentinian in A.D. 379. However, when the Italian mints came under the possession of Maximus in A.D. 387, he struck coins in the name of his son Victor, whom he hoped to elevate to the Western throne. See Pearce 1962: 23. It is difficult to tell whether such overstruck specimens are hitherto published or not.
Obverse: Bust of Valentinian II right, with diadem and draped; around, right: ... NIANVS; above, in a straight line: VICTO[R], overstruck.
Reverse: Uncertain mint marks.
Bronze.

103 1701 (HAM 74.0052 - A.5:77). Theodosius I, A.D. 378-395.
Obverse: Traces of bust, right.
Reverse: Victory advancing left, dragging a captive;around: [SLAV]S REIP [VBLICAE]; in exergue: SMAN (Antioch).
Bronze; 13.69 mm; 0.72 gr.

104. 2876 (pl. 15.45) (HAM 76.0616 - C.9:37). Arcadius, A.D. 383-408.
Obverse: Bust of Arcadius right, with pearl-diadem, cuirass, and holding spear; around: D N ARCADIVS P F AVG.

Reverse: Victory advancing left, carrying trophy and dragging captive; around: SALVS REIPVBLICAE: obliterated exergue.
Bronze; 13.12 mm; 1.17 gr.

Plate 15.45 Coin 2876.

105. 253 (DAJ - A.3:11). Honorius, A.D. 395-423. Mattingly 1960: 301, pl. LX, No. 16, dates it A.D. 407.
Obverse: Obliterated.
Reverse: Three Emperors standing, scepters in right hand and the 1eft resting on shields; youngest in center nimbate, his two colleagues look towards him; border of dots. Reminiscent of the reigns of Honorius' predecessors: Gratian, Valentinian II, and Theodosius I.
Bronze.

106. 1529 (pl. 15.46) (HAM 73.0243 - Tomb F.16:4, Arcosolium W of shaft). Honorius, A.D. 395-423. Similar to the preceding coin.
Bronze; 12.70 mm; 1.12 gr.

Plate 15.46 Coin 1529.

107. 570 (HAM 71.0572 - C.1:33). Honorius, A.D. 395-423. Bronze; 15.39 mm; 1.41 gr.

108. 117 (pl. 15.47) (HAM 68.0137 - C.1:1). *Follis* of Anastasius I, A.D. 498-518. This was the centerpiece of the reformed copper coinage of A.D. 498 (Bellinger and Grierson 1966-68: 1.21).
Obverse:Bust of Anastasius I (A.D. 491-518) right, with diadem and draped; around: DNANASTA SIVSPPAVC; border of dots.
Reverse: M (prominent mark of value—40 *nummi*); within: Є (official code no.); above: cross; star and dots in 1eft and right segments; CON (Constantinople) in segment below; border of dots.
Bronze; 34.25 mm; 1.81 gr.

Plate 15.47 Coin 117.

109. 1531 (pl. 15.48) (HAM 73.0245 - G.1:5). *Follis* of Anastasius I, A.D. 498-518. Similar to the preceding coin; official code no. Δ instead of Є. Bronze; 30.44 mm; 13.89 gr.

Plate 15.48 Coin 1531.

110. 249 (DAJ - C.1:6). *Pentanummium* of Justinian I, A.D. 527-565.
Obverse: Head of Justinian 1 right, 1eft: DNIVSTINI ....
Reverse: Obliterated.
Bronze.

111. 1188 (HAM 71.0632 - C.4:2). *Nummus* of Justinian I, A.D. 527-565.
Obverse: Bust of Justinian I facing, with cuirass.
Reverse: A (mark of value—1 *nummus*).
Bronze; 9.12 mm; 0.57 gr.

112. 1643 (pl. 15.49) (DAJ - D.1:43). *Follis* of Justinian I, A.D. 539/40.

Plate 15.49 Coin 1643.

Obverse: Bust of Justinian I (A.D. 527-565) facing, wearing cuirass, plumed helmet with diadem from which two pearls hang on either side; right hand holds *globus cruciger*; shield showing horseman on left shoulder; cross in right field: around: DNIVSTINI ANVSPPAVC; border of dots.
Reverse: M (prominent mark of value—40 *nummi*): within: A (official code no).; above: cross; left segment: ANNO; right segment: X-II-I (A.D. 539/40; in exergue: KYZ (Cyzicus); border of dots.
Bronze; 42.00 mm.

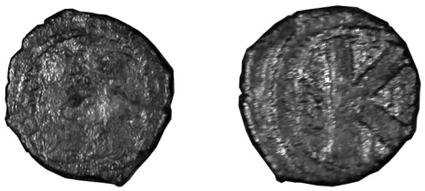
113. 2042 (HAM 74.0356 - A.9:76). *Nummus* of Justinian I, A.D. 527-565.
Obverse: Bust of Justinian I right, with pearl diadem and cuirassed.
Reverse: *Chrismon*.
Bronze; 9.70 mm; 0.55 gr.

114. 125 (pl. 15.50) (DAJ - C.1:5). *Follis* of Justin II, A.D. 572/73.
Obverse: Justin II (A.D. 565-578) and Sophia seated on double throne, holding scepters in their hands and a large *globus cruciger* between them; blundered inscription on 1eft and right; border of dots; pierced.
Reverse: M; within Γ; above: cross; 1eft segment: ANNO; right segment: S II (A.D. 572/73); [TH]EUP' (Antioch) in segment below; border of dots; pierced.
Bronze.

Plate 15.50 Coin 125.

115. 2478 (pl. 15.51) (HAM 76.0268 - C.10:4). Half *Follis* of Justin II, A.D. 575/76.
Obverse: Similar to the preceding coin, but smaller and not pierced.
Reverse: K (prominent mark of value—20 *nummi*); above, cross; beneath, ℓ (Antioch); left segment: ANNO; right segment: IX (A.D. 575/76); border of dots.
Bronze; 24.24 mm; 6.89 gr.

Plate 15.51 Coin 2478.



116. 2589 (pl. 15.52) (HAM 76.0365 - G.11:25A). A.D. 572/73. Similar to the preceding coin, regnal year U-I (A.D. 572/73). Bronze; 26.58 mm; 6.50 gr.

Plate 15.52 Coin 2589.

117. 1811 (pl. 15.53) (DAJ - D.1:74). *Follis* of Tiberius II, A.D. 580/81.
Obverse: Bust of Tiberius II (A.D. 578-582), facing, wearing consular robes and regalia, crown with a cross and two pearls hanging on either side; right hand holds mappa, left hand holds scepter with eagle surmounted by a cross; around: [ꝆOM] TIbCONS. TANTPPAV [I]: border.
Reverse: M (prominent mark of value—40 *nummi*): above: cross; left segment: ANNO; right segment: U-II (year 7 from his becoming co-emperor in A.D. 574); in exergue: CON (Constantinople).
Bronze; 27.00 mm.

Plate 15.53 Coin 1811.

118. Surface find before excavations (HAM 68.0004). *Solidus* of Constantine IV, A.D. 674-681.
Obverse: Bust of Constantine IV (A.D. 654-685) facing slightly right, bearded, with cuirass, wearing plumed helmet and diadem with ties to 1eft; right hand holds spear transversely behind head; shield showing horseman on 1eft shoulder; right: A NUSP.
Reverse: Cross atop four steps; to left and right the Emperor's two brothers—Heraclius and Tiberius (shorter) - draped, crowned, and holding *globus cruciger*; 1eft: VICTOA; right: A VꝪUA +; CONOB in segment below.
Gold; 18.60 mm; 4.24 gr.

119. 2059 (HAM 74.0372 - C.3:53). Ruler uncertain.
Obverse: Bust right, laureate and draped; blundered inscription around.
Reverse: Sol standing left, radiate head, draped, holding a crown (?); around: SOLI INVICTO [COMITI]; obliterated inscription in exergue.
Bronze; 18.77 mm; 2.61 gr.

120. 850 (HAM 71.0578 - A.1:58). Byzantine nummus. Ruler uncertain. Bronze; 11.59 mm; 0.57 gr.

121. 1711 (HAM 74.0059 - A.9:10). Ruler uncertain. *Follis* showing traces of large M. Bronze; 22.21 mm; 2.34 gr.

122. 2039 (HAM 74.0354 - G.9:3). Ruler uncertain. *Follis* showing traces of large M. Bronze; 18.34 mm; 1.43 gr.

123. 200 (HAM 68.0187 - C.2:5). Uncertain.
Obverse: Bust right, with pearl diadem; around: ... ON ... FAVG.
Reverse: Obliterated.
Bronze; 12.41 mm; 0.78 gr.

124. 1115 (HAM. 71.0628 - A.1:57). Uncertain.
Bronze; 16.13 mm; 1.00 gr.

125. 397 (DAJ - A.2:18). Uncertain.
Bronze; 10.37 mm.

126. 398 (HAM 71.0534 - A.2:18). Uncertain.
Bronze; 14.68 mm; 1.06 gr.

127. 405 (HAM 71.0535 - D.1:41). Uncertain.
Bronze; 8.08 mm; 0.39 gr.

128. 407 (DAJ - D.6:15). Uncertain.
Bronze; 10.35 mm.

129. 518 (DAJ - A.2:18). Uncertain.
Bronze; 10.15 mm.

130. 616 (DAJ - F.6:2). Uncertain.
Bronze; 10.42 mm.

131. 849 (DAJ - A.1:58). Uncertain.
Bronze; 10.33 mm.

132. 851 (HAM 71.0579 - A.1:58). Uncertain.
Bronze; 12.76 mm; 1.28 gr.

133. 854 (DAJ - B.2:1). Uncertain.
Bronze; 10.17 mm.

134. 855 (DAJ - B.3:13). Uncertain.
Bronze; 0.98 mm.

135. 856 (HAM 71.0580 - B.4:1). Uncertain.
Bronze; 9.51 mm; 0.38 gr.

136. 914 (DAJ - D.6:37) . Uncertain.
Bronze; 10.48 mm.

137. 1019 (HAM 71.0603 - C.4:41). Uncertain.
Bronze; 12.44 mm; 0.97 gr.

138. 1079 (HAM 71.0612 - D.6:33G). Uncertain.
Bronze; 10.71 mm; 0.52 gr.

139. 1517 (HAM 73.0232 - A.6:3). Uncertain.
Bronze; 13.19 mm; 1.30 gr.

140. 1526 (HAM 73.0240 - D.6:59). Uncertain.
Bronze; 12.94 mm; 0.66 gr.

141. 1538 (HAM 73.0249 - B.2:80). Uncertain.
Bronze; 14.49 mm; 0.86 gr.

142. 1540 (HAM 73.0251 - A.7:61). Uncertain.
Bronze; 11.00 mm; 0.60 gr.

143. 1541 (HAM 73.0252 - F.16:5). Uncertain.
Bronze; 18.08 mm; 1.78 gr.

144. 2105 (HAM 74.0412 - C.5:81). Uncertain.
Bronze; 13.12 mm; 1.53 gr.

145. 2468 (HAM 76.0260 - B.7:19. Uncertain.
Bronze; 13.39 mm; 1.58 gr.

146. 2676 (HAM 76.0438 - C.6:72). Uncertain.
Bronze; 13.78 mm; 1.47 gr.

Umayyad:

147. 2877 (pl. 15.54) (DAJ - G.14:26). ʿAbd al-Malik ibn Marwān, 685-705.
Obverse: Caliph standing, draped; outward inscription clockwise, beginning top right: *Li ʿAbd Allah ʿAbd al-Malik Amīr al-Muʾminīn*.
Reverse: M; below $\bar{\text{A}}$; outward inscription, clockwise, beginning top right: *Lā īlah īllā ʾllah Muḥammad Rasūl Allah*; border of dots.
Bronze; 16.00 mm.

Plate 15.54 Coin 2877.

148. 127 (pl. 15.55) (DAJ - C.1:5). Ruler uncertain.
Obverse: Traces of a small circle, top; a duck within, facing 1eft; obliterated inscription around. An interesting speciment with a duck within a circle on the obverse and ايليا on reverse area is illustrated by Stickel, cited in Nassar (1948: 123, n. 2). The above coin is perhaps the second such specimen hitherto published. Walker (1956: 224, nos. 730-733) enumerates four similar coins with the following differences: (a) the word is لتن instead of ايليا and (b) the ducks are smaller and facing right on two of them.
Reverse: Traces of a small circle, bottom; within: [ا] يلي [ا]; around, bottom: ... تن لك[ال]; traces of border.
Bronze.

Plate 15.55 Coin 127.

149. 103 (HAM 68.0130 - A.2). Ruler uncertain.
Obverse: [بسم لتن / لا] اله [الا ا / تن وحده].
Reverse: Starlike flower; beneath: [سول لتن] محمد ر.
Bronze; 16.89 mm; 2.69 gr.

150. 107 (DAJ - A.1:5). Ruler uncertain.
Obverse: وحده لتن / الا اله لا; border.
Reverse: محمد / رسول لتن / دمشق; border.
Bronze.

151. 104 (DAJ - A.1:1, surface). Ruler uncertain.
Obverse: similar to coin no. 150; obliterated inscription around.
Reverse: محمد رسول لتن; around, top: بسم لتن ...
Bronze.

152. 254 (pl. 15.56) (DAJ - A.2:11, cistern). Ruler uncertain.
Obverse: [لا اله [الا] / لتن وحده / لا شريك [له]; around: [محمد ر] سول لتن.
Reverse: [لتن احد [لتن] / الصمد لم يـ [لد] / ولم يولد; around: [... ا] لتن ضرب هذ [بسم].
Bronze.

Plate 15.56 Coin 254.

153. 278 (DAJ - D.1:10). Ruler uncertain.
Obverse: similar to coin no. 150, last word omitted; border of dots.
Reverse: similar to coin no. 150, last word omitted; border of dots.
Bronze.

154. 118 (pl. 15.57) (DAJ - C.1:4). Ruler uncertain.
Obverse: ... له / ... و ... / ... د ...; traces of border, bottom 1eft.
Reverse: Obliterated.
Bronze.

Plate 15.57 Coin 118.

155. 514 (DAJ - C.4:23). Ruler uncertain.
Obverse: Jerboa facing 1eft; border.
Reverse: *Muḥammad*: border.
Bronze; 10.40 mm.

156. 945 (DAJ - D.6:33C). Ruler uncertain.
Obverse: Similar to the preceding coin, but traces of inscription around.
Reverse: Obliterated.
Bronze; 10.66 mm.

157. 606 (HAM 71.0574 - D.6:26). Ruler uncertain. Similar to coin no. 150. Bronze; 16.43 mm; 1.51 gr.

158. 1737 (pl. 15.58) (HAM 74.0083 - A.8:1). Ruler uncertain.
Obverse: Obliterated.
Reverse: Central dot surroinded by a semicircle and three serrate circles.
Bronze; 15.66 mm; 0.58 gr.

Plate 15.58 Coin 1737.

159. 1946 (pl. 15.59) (DAJ - C.7:34). Ruler uncertain.
Obverse: *Lā īlah īllā ʾllah/waḥda/h Aīlīā*; border.
Reverse: *Muḥammad/Rasūl/Allah*; border.
Bronze; 23.00 mm.

Plate 15.59 Coin 1946.

160. 2062 (HAM 74.0374 - C.8:3). Ruler uncertain.
Obverse: Similar to coin no. 153, but no traces of border.
Reverse: Obliterated.
Bronze; 14.47 mm; 0.52 gr.

161. 2475 (HAM 76.0266 - C.6:4). Ruler uncertain. Similar to coin no. 148, but in poorer condition. Bronze; 18.20 mm; 2.64 gr.

162. 2592 (HAM 76.0366 - F.31:11). Ruler uncertain.
Obverse: Similar to coin no. 150.
Reverse: Similar to coin no. 149, but the star-like flower is smaller and the inscription is in three lines.
Bronze; 17.36 mm; 2.70 gr.

163. 2878 (HAM 76.0617 - G.14:22). Ruler uncertain.
Obverse: Similar to coin no. 150.
Reverse: Obliterated
Bronze; 15.64 mm; 2.57 gr.

164. 947 (DAJ - D.6:33C). Uncertain.
Bronze; 10.38 mm.

165. 2057 (HAM 74.0370 - D.4:62). Uncertain.
Bronze; 18.22 mm; 2.40 gr.

ᶜAbbāsid:

166. 2590 (DAJ - C.9:10). *Dirham* of Abū Muḥammad ᶜAlī al-Muktafī, 902-908.
Obverse: Obliterated.
Reverse: [*Li-ʾllah*]*/Muḥammad/Rasūl/Allah/al-Muk* [*tafī bi-ʾllah*]; linear border; illegible margin.
Silver; 23.50 mm; 2.61 gr.

Ayyūbid:

Damascus Branch:

167. 2587 (pl. 15.60) (HAM 76.0363 - G.4:22). Ṣalāḥ ad-Dīn, 1169-1193.
Obverse: *Al-Malik/an-Nāṣir*; border of dots; illegible margin.
Reverse: *Yūsuf/Bin Ayyūb*: border of dots, illegible margin.
Bronze; 23.78 mm; 4.84 gr.

Plate 15.60 Coin 2587.

168. 258 (pl. 15.61) (DAJ - D.3:9). Al-ᶜAdil, 1196-1218.
Obverse: Above, a rose; beneath, semicircular, illegible inscription
Reverse: الملك / العادل بن ايوب; illegible margin around dotted border, bottom.
Bronze.

Plate 15.61 Coin 258.

169. 1094 (DAJ - D.6:33G). Al-ᶜAdil, 1196-1218. Similar to preceding coin. Bronze; 10.80 mm.

170. 1642 (HAM 73.0327 - G.3:2, topsoil). Al-ᶜAdil, 1196-1218. Similar to the preceding coins.
Bronze; 24.75 mm; 3.61 gr.

171. 1738 (HAM 74.0084 - E.4:4). Al-ᶜAdil, 1196-1218.
Obverse: .../*ad-Dīn/al-Malik al-ᶜA[dil]/*...; border dots; traces of obliterated margin.
Reverse: .../*Abū Bakr Bin ... / ...*; border of dots; traces of obliterated margin.
Bronze; 24.41 mm; 5.30 gr.

172. 1081 (DAJ - D.6:33B). Aṣ-Ṣāliḥ Ismaᶜīl, 1237-1245.
Obverse: *Al-Malik aṣ-Ṣāliḥ / Ismaᶜīl*; illegible inscription betwen two dotted circles around.
Reverse: *Ibn al-Makil / al-ᶜAdil Muḥammad*; illegible inscription between two dotted circles around.
Bronze; 20.34 mm.

173. 2350 (pl. 15.62) (DAJ - G.11:1). Ruler uncertain.
Obverse: Yū (continued as the last line) *al-Malik an-Nāṣir* (last two consonants downward) */suf* (continuation of the first line); border of dots; illegible margin.

Plate 15.62 Coin 2350.

Reverse: *Al-Malik aṣ-Ṣāliḥ / bi-ʾl-ʿadil*; border of dots; around: *Ḍuriba haḏā ʾl-fils bi-Dimaṯḥk sanat ... waṯḥamanīn* (*i.e.* [5]8[-] A.H., A.D. 1185-1193).
Bronze; 23.20 mm.

Egyptian Branch:

174. 1769 (HAM 74.0111 - C.6:11). Al-ʿAzīz ʿUṯḥmān, 1193-1198.
Obverse: *ʿUṯḥmān/al-Malik al-ʿAzīz*; ornament beneath; border with illegible margin.
Reverse: *suf* (continuation of the last line) /*Bin al-Malik an-Nāṣir* (last two consonants downward) /*Yū* (continued as the first line); border with illegible margin.
Bronze; 23.48 mm; 5.93 gr.

175. 132 (HAM 68.0145 - C.2:1). Al-Manṣūr Muḥammad I ? 1198/99.
Obverse: د[محم] / صور [المنا]; third of a flower, 1eft.
Reverse: traces of borders, the outer dotted.
Bronze; 18.42 mm; 1.58 gr.

176. 1096 (DAJ - D.6:33H). Al-Kāmil Muḥammad, 1218-1238.
Obverse: Obliterated.
Reverse: Within double square (the outer dotted): *Al-Mamlik al-Kā/mil bi-Amr Allah*.
Bronze; 20.05 mm.

177. 2588 (HAM 76.0364 - C.5:134). Al-Kāmil Muḥammad, 1218-1238. Similar to the preceding coin. Bronze; 22.75 mm; 3.07 gr.

178. 460 (pl. 15.63) (DAJ - from the C.4:37 hoard). *Dirham* of aṣ-Ṣāliḥ Ayyūb, 1240-1249.
Obverse: Within double square (the outer dotted): *Al-Imām / al-Mustaʿṣim / bi-ʾllah Abū Aḥmad ʿAbd / Allah Amīr al-Muʾminīn*;

Plate 15.63 Coin 460.

in segments between square and double border (the outer dotted): *Al-Ḳāhira / sanat ārbaʿa wa / ...* ([64]4 A.H).
Reverse: Similar, within: *Al-Malik aṣ-Ṣāliḥ / Niḏjm ad-Dīn Ayyūb / ...*; in segments: *Muḥammad Rasū/l Allah ārsalahu / bi-ʾl-hudā / ....*
Bronze; 2.79 gr.

179. 1077 (DAJ - D.6:33G). Aṣ-Ṣāliḥ Ayyūb, 1240-1249.
Obverse: .../*al-Mustaʿṣim /* [*bi*]-*ʾllah Ab*[*ū ʾl-*...].
Reverse: .../[*Niḏj*]*m ad-Dīn Ayyūb*; traces of dotted square.
Bronze; 10.78 mm.

Aleppo (Ḥalab) Branch:

180. 1148 (DAJ - D.6:33G). Aẓ-Ẓāhir Ghāzi, 1186-1216.
Obverse: Within double octagram (the inner dotted): *Al-Imām / an-Nāṣir*; between octagram and outer dotted circle: ... / *īlah.../ īllā / ʾllah / ....*
Reverse: Similar, within: *Al-Malik / aẓ-Ẓāhir;* obliterated inscription around.
Bronze; 20.22 mm.

181. 1533 (pl. 15.64) (DAJ - G.1:9). Aẓ-Ẓāhir Ghāzi, 1186-1216. Similar to the preceding coin. Bronze; 24.00 mm.

Plate 15.64 Coin 1533.

182. 1020 (DAJ - C.5:3). Al-ᶜAzīz Muḥammad, 1216-1236.
Obverse: *Al-Imām* / *an-Nāṣir* / *al-Malik al-ᶜAdil* / [*Abū*] *Bakr*.
Reverse: Within double octagram (the inner dotted): ... / *al-ᶜAziz*.
Bronze; 20.35 mm.

183. 121 (pl. 15.65) (DAJ - C.1:2). Al-Nāṣir Ṣalāḥ al-Dīn Yūsuf, 1236-1260.
Obverse: صلاح الدنيا وا / [لدي]ن يوسف بن محمد / الملك الناصر within square; in 1eft segment between square and outer border: [وار] بعين.
Reverse: الستعصم / بلتن ابو احمد / امير الؤمنين / الامام within double square (the outer dotted); in right segment between square and outer border: ... لا اله الا ا.
Bronze.

Plate 15.65 Coin 121.

184. 1086 (DAJ - D.6:33H). Al-Nāṣir Ṣalāḥ al-Dīn Yūsuf, 1236-1260.
Obverse: Within triple hexagram (the middle dotted): *Al-Imām* / *al-Mustaᶜṣim*; traces of border.
Reverse: Similar, within: *Al-Malik* / *an-Nāṣir*.
Bronze; 10.71 mm.

185. 2472 (HAM 76.0263 - C.6:45). Al-Nāṣir Ṣalāḥ al-Dīn Yūsuf, 1236-1260. Similar to coin no. 183, but in poorer condition. Bronze; 18.93 mm; 1.45 gr.

186. 1150 (DAJ - D.6:33I). Ruler uncertain.
Obverse: *Al-Imām a/n-Nāṣir Amīr* / *al-Muʾminin*.
Reverse: Ghāzi / ...; arabesque beneath.
Bronze; 20.25 mm.

Ḥamāh Branch:

187. 204 (pl. 15.66) (DAJ - D.1:8). Al-Manṣūr Muḥammad I or II, 1191-1220 or 1244-1284.

Plate 15.66 Coin 204.

Obverse: ضرب / الملك العا[زيز] / المنصور م[حمد]; two separating lines across; traces of border.
Reverse: [الا] مام / [الستع] صم / [ال] منصور محمد; arabesque and border, bottom.
Bronze.

188. 942 (DAJ - D.5:5E). Similar to the preceding coin. Bronze; 10.60 mm.

189. 1087 (pl. 15.67) (HAM 71.0616 - D.6:33F). Al-Manṣūr Muḥammad I or II, 1191-1220 or 1244-1284.
Obverse: Within triple hexagram (the middle dotted): *Al-Malik* / *aṣ-Ṣāliḥ*.
Reverse: Similar, within: *Al-Malik* / *al-Manṣūr*.
Bronze; 18.60 mm; 0.70 gr.

Plate 15.67 Coin 1087.

190. 1095 (pl. 15.68) (HAM 71.0623 - D.6:33H). Similar to the preceding coin. Bronze; 18.28 mm; 1.28 gr.

Plate 15.68 Coin 1095.

191. 122 (DAJ - C.1:4). Abū ʾl-Fidāʾ, 1310-1332.
Obverse: Above: ... الفا ; 1eft., within traces of arabesque: ... ابو / ب.

Reverse: Traces of dotted border, 1.; date: ٧١١ (711 A.H., A.D. 1311).
Bronze.

192. 206 (HAM 68.0303 - C.1:6). Ruler uncertain. Ḥamāh Branch, 1275/76.
Obverse: Top 1eft, in segments between corner of square and third of outer circle: ضرب .../ [ار]بعة وسبعين (i.e., (6)74 A.H).; bottom right, overstruck mint mark?
Reverse: Obliterated.
Bronze; 18.86 mm.

193. 197 (DAJ - C.1:2). Ruler uncertain.
Obverse: Arabesque; beneath: الامام الستعصم; traces of border; slightly double-struck.
Reverse: Within arabesque: يل [اسمع]? traces of wreath, bottom.
Bronze.

194. 256 (pl. 15.69) (HAM 68.0216 - D.2:16). Ruler uncertain.
Obverse: Within part of dotted square: لطان [...السر] / بامر لتن.
Reverse: Within traces of dotted square and circle: ... / منين ... / ث ... /...لا [ا]بن [محم]د.
Bronze; 20.55 mm; 2.97 gr.

Plate 15.69 Coin 256.

195. 1530 (HAM 73.0244 - G.1:1). Ruler uncertain.
Obverse: Within two horizontal lines across the field: *Al-Malik*; traces of borders, the outer dotted.
Reverse: Arabesque; traces of border.
Bronze; 21.40 mm; 2.49 gr.

196. 2061 (HAM 74.0373 - C.8:3). Ruler uncertain.
Obverse: Obliterated.
Reverse: Arabesque within circle.
Bronze; 15.76 mm; 0.78 gr.

197. 381 (HAM 71.0531 - C.4:30). Ruler uncertain. Bronze; 19.35 mm; 1.47 gr.

198. 414 (HAM 71.0537 - A.5:1). Ruler uncertain. Bronze; 20.07 mm; 1.69 gr.

199. 515 (DAJ - D.5:3). Ruler uncertain. Silver; .90 mm.

200. 546 (HAM 71.0570 - A.2:23). Ruler uncertain. Bronze; 20.86 mm; 2.07 gr.

201. 1011 (DAJ - C.1, clean-up). Ruler uncertain. Bronze; 20.14 mm.

202. 1031 (HAM 71.0611 - D.6:31). Ruler uncertain. Bronze; 20.14 mm; 3.23 gr.

203. 1078 (DAJ - D.6:33G). Ruler uncertain. Bronze; 20.06 mm.

204. 1080 (DAJ - D.6:33G). Ruler uncertain. Bronze; 10.83 mm.

205. 1097 (HAM 71.0624 - D.6:36). Ruler uncertain. Bronze; 19.78 mm; 1.85 gr.

206 1141 (DAJ - D.6:33E). Ruler uncertain. Bronze; 20.12 mm.

Mamlūk:

Baḥrī Dynasty:

207. 114 (DAJ - B.1:1, topsoil). *Dirham* of al-Manṣūr Nūr al-Dīn ʿAlī, 1257-1259.
Obverse: سله بالهدى [لله/ ار] الرسول محمد.
Reverse: [ا]لمنصو[ر...]/ لدين[ا].
Silver.

208. 494 (DAJ - from the C.4:37 hoard). *Dirham* of al-Manṣūr Nūr ad-Dīn ʿAlī, 1257-1259.
Obverse: Within a pattern similar to coin no. 178: *Al-Im*[*ām*] / *al-Mustaʿ*[*ṣim*] / *bi-ʾllah Amīr* ... ; in segments: *Bi-sm Allah* / ....
Reverse: Similar, within: *Al-Malik al-Manṣūr / Nūr ad-Dīn ʿAlī / Ibn Aybak*; obliterated inscription in segments.
Silver-coated bronze; 2.86 gr.

209. 447 (DAJ - from the C.4:37 hoard). Half-*dirham*. Similar to coin no. 207. Silver-coated bronze; 1.47 gr.

210. 116 (pl. 15.70) (DAJ - B.1:2). Al-Ẓāhir Bībars, 1260-1277.
Obverse: هر / [ظا]لملك الـ / [ن]السلطا.
Reverse: Above: [لله]الـ رسول محمد; beneath: blank segment between dotted line of square and outer circles, the outermost dotted.
Bronze.

Plate 15.70 Coin 116.

211. 943 (DAJ - D.5:5E). Al-Ẓāhir Bībars, 1260-1277.
Obverse: Obliterated.
Reverse: Lion facing left; above: *Al-Malik*; beneath: *Bibars*.
Bronze; 10.87 mm.

The Hoard

It could be said that a number of coins accumulated in a *locus* may be treated as a hoard. In this case Nos. 46, 188, 211, 276, 288-90, 293-96, 308, 318-19, 325-27, 334, 387, and 394-98 found in D.5:5 and Nos. 9**,** 75, 138, 156, 164, 169, 172, 176, 179-180, 184, 186, 189-90, 203-4, 206, 279-80, 291, 309, 320-23, 328-32, 335, 343, 388, and 399-400 found in D.6:33 could be counted as additional hoards. But such a consideration has its limitations. Accumulated hoards cover a wide chronological range and are of little value for interpretation of stratigraphy. Such hoards are built up haphazardly, *i.e.*, coins dropped in cisterns or carried off by drains, sunk through soft soil from higher strata on account of their own weight.

The hoard under consideration is a savings hoard found in a sealed locus C.4:37. It is reminiscent of the remarks mde by the satirical playwright Aristophanes in *ca.* 400 B.C.:

"The public has often given us the appearance of treating our wisest and best citizens in the same way as it treats old and new coins. We do not use the latter ... though they are of purer metal ... we prefer to use bad copper pieces, struck and embossed in the very worst way" (Laing 1970: 53).

These remarks are true *heri et hodie et in saecula*- and so they were in the 1270s when an occupant of the "north building" of Square 4 in Area C died, leaving behind his savings. The coins, consisting of bronze cores with silver coatings, were kept in an earthen lamp and hid in a little niche under the west end of a column drum used as a horizontal bench along the south wall. Apparently, no other member of the household knew about the scant savings which consisted of 66 pieces - 32 *dirhams* and 34 half-*dirhams.* Three chronologically earlier coins (447, 460 and 494) from the hoard already appear in the catelogue (above)**.**

212. 446 (HAM 71.0538 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Ḥākim bi-Amr Allah / Abū ʾl-Abbās Aḥmad / Amīr al-Muʾminīn*; similar border.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
Silver-coated bronze; 22.65 mm; 3.39 gr.

213. 448 (pl. 15.71) (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; the mint and date as a marginal inscription surround the obverse legend beginning from top: *Ḍuriba bi-ʾl-Ḳāhira / sanat <u>kh</u>amsa / wa sittīn / ...* ([6]65 A.H., A.D. 1266/67).
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
Silver-coated bronze; 2.71 gr.

Plate 15.71 Coin 448.

214. 449, DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.

Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
Silver-coated bronze; 2.42 gr.

215. 451 (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
Silver-coated bronze; 2.58 gr.

216. 452 (HAM 71.0539 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Ḥākim bi-Amr Allah / Abū ʾl-Abbās Aḥmad / Amīr al-Muʾminīn*; similar border.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
Silver-coated bronze; 21.65 mm; 2.93 gr.

217. 454 (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
Silver-coated bronze; 2.76 gr.

218. 456 (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
Silver-coated bronze; 2.98 gr.

219. 457 (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir / Amīr al-Muʾminīn.* Similar to coin no. 240, but add to left and right margin: *Ḍuriba bi-ʾl-Ḳāhira*; double border (the outer dotted). The undated coins are "coterminous with the short duration of El-Mustanṣir's Khalifate, or 659-661 (1260-1262)" (cf. Poole 1879: 4.142 n). It should be noted that coins bearing these dates have been found, cf. coin nos. 228 and 241 (A.D.1261/62) and 222 (A.D. 1262/63).
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
Silver-coated bronze; 2.84 gr.

220. 458 (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 3.07 gr.

221. 462 (HAM 71.0543 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Amīr al-Muʾminīn / al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir.*
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 23.29 mm; 2.95 gr.

222. 463 (pl. 15.72) (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; the mint and date as a marginal inscription surround the obverse legend: *Ḍuriba bi-ʾl-Ḳā/hira sanat āḥad wa sittīn / wa sit-miʾāa / wa dīn al-ḥaḳ* (661 A.H., A.D.1262/63).
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 3.38 gr.

Plate 15.72 Coin 463.

223. 464 (HAM 71.0544 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; the mint and date as a marginal inscription surround the obverse legend: *Ḍuriba bi-ʾl-Ḳāhira / sanat sabʿa / wa sittīn / ...* ([6]67 A.H., A.D. 1268/69).
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 21.86 mm; 2.10 gr.

224. 465 (pl. 15.73) (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 2.68 gr.

Plate 15.73 Coin 465.

225. 466 (HAM 71.0545 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 21.79 mm; 2.92 gr.

226. 467 (pl. 15.74) (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 2.74 gr.

Plate 15.74 Coin 467.

227. 468 (HAM 71.0546 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Ḥākim bi-Amr Allah / Abū ʾl-Abbās Aḥmad / Amīr al-Muʾminīn*; similar border.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 21.91 mm; 2.84 gr.

228. 470 (pl. 15.75) (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; the mint and date as a marginal inscription surround the obverse legend beginning from left: *Ḍuriba bi-ʾl-Ḳā/hira sanat sittīn / ...* ([6]60 A.H., A.D. 1261/62).
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 2.72 gr.

Plate 15.75 Coin 470.

229. 471 (HAM 71.0547 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir / Amīr al-Muʾminīn.*
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 23.29 mm; 2.91 gr.

230. 472 (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; the mint and date as a marginal inscription surround the obverse legend: *Ḍuriba bi-ʾl-Ḳāhira / sanat sabʿa / wa sittīn / ...* ([6]67 A.H., A.D. 1268/69).
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 2.79 gr.

231. 474 (HAM 71.0548 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Ḥākim bi-Amr Allah / Abū ʾl-Abbās Aḥmad / Amīr al-Muʾminīn*; similar border.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 21.73 mm; 2.90 gr.

232. 476 (HAM 71.0549 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir / Amīr al-Muʾminīn.*
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 19.44 mm; 3.11 gr.

233. 479 (HAM 71.0551 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā.*
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 20.38; 2.83 gr.

234. 480 (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Ḍuriba bi-Dimaṣḥḳ / al-Imām al-Ḥākim / bi-Amr Allah Abū ʾl-Abbās / Aḥmad Amīr al-Muʾminīn*; similar border.
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 2.90 gr.

235. 481 (HAM 71.0552 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir / Amīr al-Muʾminīn.*
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 22.91 mm; 2.52 gr.

236. 483 (HAM 71.0553 - C.4:37). Pierced *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir / Amīr al-Muʾminīn.*
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 22.22 mm; 2.72 gr.

237. 486 (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.

Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir / Amīr al-Muʾminīn.* Similar to coin no. 240, but add to left and right margin: *Ḍuriba bi-ʾ/l-Ḳāhira*; double border (the outer dotted).
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 2.75 gr.

238. 488 (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; the mint and date as a marginal inscription surround the obverse legend beginning from top: *Ḍuriba bi-ʾl-Ḳāhira / sanat ḵẖamsa / wa sittīn /* ... ([6]65 A.H., A.D. 1266/67).
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 2.82 gr.

239. 489 (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir / Amīr al-Muʾminīn.*
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 2.81 gr.

240. 492 (DAJ - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir / Amīr al-Muʾminīn.*
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 2.73 gr.

241. 496 (pl. 15.76) (HAM 71.0556 - C.4:37). *Dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; the mint and date as a marginal inscription surround the obverse legend beginning from left: *Ḍuriba bi-ʾl-Ḳā/hira sanat sittīn /* ... ([6]60 A.H., A.D. 1261/62).
Reverse: *Aṣ-Ṣāliḥī / as-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left; similar border.
silver-coated bronze; 22.39 mm; 2.95 gr.

Plate 15.76 Coin 496.

242. 450 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah*; around: *Lā īlah īllā ʾllah Muḥammad / Rasūl Allah*.
Reverse: *Al-Malik / aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 1.40 gr.

243. 453 (HAM 71.0540 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir.*
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left.
silver-coated bronze; 16.01 mm; 1.98 gr.

244. 455 (HAM 71.0541 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir.*
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left.
silver-coated bronze; 15.72 mm; 1.82 gr.

245. 459 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.

Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir.*
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left.
silver-coated bronze; 1.45 gr.

246. 461 (HAM 71.0542 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾ/llah Muḥammad / Rasūl Allah*; around: ... *ḍuriba* ....
Reverse: *Al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 15.52 mm; 0.94 gr.

247. 469 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; around: ... *ḍuriba*....
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left.
silver-coated bronze; 1.28 gr.

248. 473 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; around: ... *ḍuriba*....
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left.
silver-coated bronze; 1.60 gr.

249. 475 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah / Amīr al-Muʾminīn.*
Reverse: *As-Sulṭān* / *al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 1.43 gr.

250. 477 (HAM 71.0550 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Amīr al-Muʾminīn / al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir.*
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left.
silver-coated bronze; 13.81 mm; 1.33 gr.

251. 478 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah*; around: *Lā īlah īllā ʾllah Muḥammad / Rasūl Allah*.
Reverse: *Al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 0.96 gr.

252. 482 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; around: ... *ḍuriba*....
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left.
silver-coated bronze; 2.37 gr.

253. 484 (pl. 15.77) (HAM 71.0554 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah*; around: *Lā īlah īllā ʾllah Muḥammad / Rasūl Allah*.
Reverse: *Al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 22.63 mm; 1.55 gr.

Plate 15.77 Coin 484.

254. 485 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir.*
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left.
silver-coated bronze; 1.76 gr.

255. 487 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; around: ... *ḍuriba*....
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left.
silver-coated bronze; 1.67 gr.

256. 490 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah*; around: *Lā īlah īllā ʾllah Muḥammad / Rasūl Allah*.
Reverse: *Al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 1.45 gr.

257. 491 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾ/llah Muḥammad / Rasūl Allah*; around: ... *ḍuriba* ....
Reverse: *Al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 1.29 gr.

258. 493 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah*; around: *Lā īlah īllā ʾllah Muḥammad / Rasūl Allah*.
Reverse: *Al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 1.21 gr.

259. 495 (HAM 71.0555 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾllah / Muḥammad Rasūl Allah / ārsalahu bi-ʾl-hudā*; around: ... *ḍuriba*....
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left.
silver-coated bronze; 15.78 mm; 1.29 gr.

260. 497 (HAM 71.0557 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah / Amīr al-Muʾminīn.*
Reverse: *As-Sulṭān* / *al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 15.71 mm; 1.69 gr.

261. 498 (HAM 71.0558 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah / Amīr al-Muʾminīn.*
Reverse: *As-Sulṭān* / *al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 15.91 mm; 1.41 gr.

262. 499 (HAM 71.0559 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām* / *al-Ḥākim*; around: *Bi-sm Allah* ....
Reverse: *Al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 15.01 mm; 1.07 gr.

263. 500 (HAM 71.0560 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah / Amīr al-Muʾminīn.*
Reverse: *As-Sulṭān* / *al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 15.33 mm; 0.99 gr.

264. 501 (HAM 71.0561 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah / Amīr al-Muʾminīn.*
Reverse: *As-Sulṭān* / *al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 17.92 mm; 1.25 gr.

265. 502 (HAM 71.0562 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Lā īlah īllā ʾ/llah Muḥammad / Rasūl Allah*; around: ... *ḍuriba* ....
Reverse: *Al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 16.21 mm; 0.91 gr.

266. 503 (HAM 71.0563 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah*; around: *Lā īlah īllā ʾllah Muḥammad / Rasūl Allah*.
Reverse: *Al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 16.06 mm; 1.24 gr.

267. 504 (HAM 71.0564 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah / Amīr al-Muʾminīn.*
Reverse: *As-Sulṭān* / *al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 14.81 mm; 1.44 gr.

268. 505 (HAM 71.0565 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām* / *al-Ḥākim*; around: *Bi-sm Allah ....*
Reverse: *Al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 15.48 mm; 1.58 gr.

269. 506 (HAM 71.0566 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah / Amīr al-Muʾminīn.*
Reverse: *As-Sulṭān* / *al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 16.00 mm; 1.49 gr.

270. 507 (HAM 71.0567 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah / Amīr al-Muʾminīn.*
Reverse: *As-Sulṭān* / *al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 15.58 mm; 1.64 gr.

271. 508 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām al-Mustanṣir bi-ʾllah / Abū ʾl-Ḳasm Aḥmad Bin / al-Imām aẓ-Ẓāhir.*
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir Rukn ad-Dunyā wa ʾd-Dīn / Bibars Ḳasīm Amīr al-Muʾminīn*; beneath, lion facing left.
silver-coated bronze; 1.05 gr.

272. 509 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah / Amīr al-Muʾminīn.*
Reverse: *As-Sulṭān* / *al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 1.35 gr.

273. 1009 (HAM 71.0595 - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām* / *al-Ḥākim*; around: *Bi-sm Allah ....*
Reverse: *Al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 14.42 mm; 0.84 gr.

274. 1010 (DAJ - C.4:37). Half-*dirham* of aẓ-Ẓāhir Bībars, 1260-1277.
Obverse: *Al-Imām / al-Mustanṣir bi-ʾllah / Amīr al-Muʾminīn.*
Reverse: *As-Sulṭān* / *al-Malik* / *aẓ-Ẓāhir*; beneath, lion facing left.
silver-coated bronze; 10.48 mm; 1.55 gr.

Baḥrī Dynasty (continued)**:**

275. 131 (DAJ - C.2:1, topsoil). An-Nāṣir Muḥammad, 1293-94, 1299-1309, 1310-41.
Obverse: Within small circle: محمد; around: الدنيا والد]ين السلطان الملك الناصر باصر.
Reverse: Obliterated.
Bronze.

276. 1101 (HAM 71.0789 - D.5:5F). An-Nāṣir Muḥammad, 1293- 1294, 1299-1309, 1310-1341. Similar to the preceding coin. Bronze; 20.93 mm; 2.86 gr.

277. 1735 (HAM 74.0081 - A.9:7). *Dirham* of an-Nāṣir Muḥammad, 1293-1294, 1299-1309, 1310-1341.
Obverse: .../[*Muḥamm*]*ad Rasūl Allah / [ār]salahu bi-ʾl-hudā/....*
Reverse: *As-Sulṭān al-Malik / an-Nāṣir Nāṣir ad-Dunyā / wa ʾd-Dīn Muḥammad ....*
Silver; 21.16 mm; 2.61 gr.

278. 2673 (HAM 76.0436 - C.9:14). An-Nāṣir Muḥammad, 1293-1294, 1299-1309, 1310-1341.
Obverse: [*Allah*] */ wa mā an-naṣr īllā min ʿind / lā īlah īllā ʾllah Muḥammad / ....*
Reverse: [*Bi-Dimaṯḫ*] / [*sanat*] *ḫams* [*wa ṯhalaṯhīn*] / [*a*]*s-Sulṭān al-Malik an-Nā*[*ṣir*] / [*Nā*]*ṣir ad-Dunyā wa ʾd-Dīn* [*Muḥammad*] / [*Bin*] *al-Malik Almanṣ*[*ūr*] / *Ḳalāūn* ([7]35 A.H., A.D.1334).
Bronze; 20.70 mm; 1.93 gr.

279. 950 (DAJ - D.6:33C). *Dirham* of Aṣ-Ṣāliḥ Ismaʿīl, 1342-1345.
Obverse: [*Lā*] *īlah īllā ʾllah* / [*Muḥammad*] *Rasūl Allah* / [*ārsa*]*lahu bi-ʾl-hudā* / [*wa dīn*] *al-ḥaḳ.*
Reverse: ... / *as-Sulṭān al-Ma*[*lik*] / *aṣ-Ṣāliḥ ʿImād ad-*[*Dunyā*] / *wa ʾd-Dīn Ismaʿīl ... / an-Nāṣir Muḥammad*.
Silver; 20.00 mm; 2.12 gr.

280. 952 (HAM 71.0594 - D.6:33C). Similar to the preceding coin. Silver; 20.16 mm; 2.59 gr.

281. 1924 (DAJ - A.9:34). *Dirham* of an-Nāṣir Ḥasan, 1347-51, 1351-61.
Obverse: ... / [*Lā*] *īlah īllā ʾllah* / [*Muḥammad*] *Rasūl Allah / ā/rsalahu bi-ʾl-hudā.*
Reverse: [*As-Sul*]*ṭān al-Malik* / [*an-Nā*]*ṣir Nāṣir ad-Dun*[*yā/wa ʾd-*]*Dīn Ḥasan* [*Bin*] *al-Mal*[*ik*].
Silver; 19.00 mm; 3.22 gr.

282. 193 (pl. 15.78) (DAJ - A.2:11, cistern). Al-Manṣūr Ṣalāḥ al-Dīn Muḥammad, 1361-1363.
Obverse: Small circle within equilateral triangle; within: محمد; in segments between triangle and outer circle: [الملك / الم] السلطان [نصو]ر; border of dots.
Reverse: Similar, but inscription within small circle: ضرب; in segments: وسبعمئة / [ثلاث وستين دم]شـ (763 A.H.).
Bronze.

Plate 15.78 Coin 193.

283. 2063 (HAM 74.0375 - C.6, balk trim). Al-Manṣūr Ṣalāḥ al-Dīn Muḥammad, 1361-1363.
Obverse: Obliterated.
Reverse: [*As-Sulṭā*]*n al-Malik* / [*al-Manṣū*]*r Muḥammad*; traces of border.
Bronze; 18.46 mm; 1.50 gr.

284. 1712 (HAM 74.0060 - C.6:22). Similar to coin no. 282. Bronze; 18.49 mm; 3.06 gr.

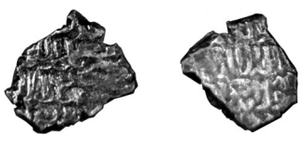
285. 366 (pl. 15.79) (DAJ - C.4:24). Al-Ashraf Shaʿbān, 1363-1377.
Obverse: [*As-Sul*]*ṭān al-Malik* / [*al-Ashra*]*f Shaʿbān* / ...; double border (the outer dotted).
Reverse: Within hexagram of two triangles: *Ṭarāblu/s*.
Bronze; 20.00 mm.

Plate 15.79 Coin 366.

286. 1519 (HAM 73.0234 - A.6:4). Al-Ashraf Shaʿbān, 1363-1377.
Obverse: Obliterated.
Reverse: *As-Sulṭān al-Ma*[*lik*] / *al-Ashraf Nā*[*ṣir*] ...
Bronze; 18.39 mm; 1.06 gr.

287. 106 (pl. 15.80) (HAM 68.0131 - A.2:6). Al-Manṣūr ʿAlāʾ al-Dīn ʿAlī, 1377-1381. Poole 1879: 4.186-87, pl. 2, nos. 607-10 designates this type as silver. However, tests at the Physics Department of Andrews University show that this coin is made of an alloy with more copper content than silver. It was a common practice in ancient times to mutilate gold and silver coins. This was prohibited in Islam; cf. Wensinck 1960: 47.
Obverse: لا اله الا لتن [محمد / رس]ول لتن / الدين له] [لتن / وما النصر ا]لا من [عند لتن] ارسله باهدى / ودين الحـ ليظهره على /.
Reverse: المنصور / علا الدنيا والدين على بن الملك محمد / وثما] نين وسبع[مئة] [ضرب بـ... / السلطان الملك الاشرف] شعبان بن حسن بن الم[لك الناصر.
Bronze; 18.49 mm; 2.41 gr.

Plate 15.80 Coin 106.



288. 911 (HAM 71.0581 - D.5:5E). Al-Manṣūr ʿAlāʾ al-Dīn ʿAlī, 1377-1381. Similar to the preceding coin. Bronze; 14.60 mm; 14.63 gr.

289. 939 (HAM 71.0586 - D.5:5E). Al-Manṣūr ʿAlāʾ al-Dīn ʿAlī, 1377-1381. Similar to coin no. 287. Bronze; 13.53 mm; 1.90 gr.

290. 1139 (HAM 71.0629 - D.5:5E). Al-Manṣūr ʿAlāʾ al-Dīn ʿAlī, 1377-1381. Similar to coin no. 287. Bronze; 10.94 mm; 0.91 gr.

291. 1093 (HAM 71.0622 - D.6:33F). Al-Manṣūr ʿAlāʾ al-Dīn ʿAlī, 1377-1381. Similar to the proceding coins. Bronze; 12.18 mm; 1.03 gr.

Burdji Dynasty:

292. 120 (pl. 15.81) (DAJ - C.1:4). Aẓ-Ẓāhir Barḳūḳ, 1382-1399.
Obverse: [ابا]و سعيد برقوق / [خلد] لتن [ملكه] / السلطان.
Reverse: within dotted circle, above: برقوق; beneath: [...نين]ا[م]ئة خمس ....
Bronze.

Plate 15.81 Coin 120.

293. 937 (DAJ - D.5:5E). Aẓ-Ẓāhir Barḳūḳ, 1382-1399. Similar to the preceding coin. Bronze; 10.88 mm.

294. 935 (DAJ - D.5:5E). Aẓ-Ẓāhir Barḳūḳ, 1382-1399.
Obverse: .../*as-Sulṭān al-Malik / Barḳūḳ*: two straight lines across the field.
Reverse: Within hexagram of two triangles: *Ḍuriba / bi-Dimaṯḳ*.
Bronze; 10.60 mm.

295. 936 (HAM 71.0584 - D.5:5E). Aẓ-Ẓāhir Barḳūḳ, 1382-1399.
Obverse: .../*as-Sulṭān al-Malik / Barḳūḳ*: two straight lines across the field.
Reverse: Within hexagram of two triangles: *Ḍuriba / bi-Dimaṯḳ*.
Bronze; 19.54 mm; 2.62 gr.

296. 941 (HAM 71.0588 - D.5:5E). Aẓ-Ẓāhir Barḳūḳ, 1382-1399.
Obverse: .../*as-Sulṭān al-Malik / Barḳūḳ*: two straight lines across the field.
Reverse: Within hexagram of two triangles: *Ḍuriba / bi-Dimaṯḳ*.
Bronze; 18.42 mm; 2.44 gr.

297. 581 (DAJ - C.5:1, inside a Byzantine lamp). Aẓ-Ẓāhir Barḳūḳ, 1382-1399. Similar to the preceding coins. Bronze.

298. 1518 (pl. 15.82) (HAM 73.0233 - A.6:4). Aẓ-Ẓāhir Barḳūḳ, 1382-1399. Similar to the preceding coins; pierced. Bronze; 21.67 mm; 3.03 gr.

Plate 15.82 Coin 1518.

299. 1527 (pl. 15.83) (HAM 73.0241 - D.4:1, top soil). Similar to the preceding coins. Bronze; 17.20 mm; 1.98 gr.

Plate 15.83 Coin 1527.

300. 1532 (pl. 15.84) (HAM 73.0246 - G.1:5). Similar to the preceding coins. Bronze; 17.50 mm; 2.26 gr.

Plate 15.84 Coin 1532.

301. 2471 (DAJ - C.8:18). Aẓ-Ẓāhir Barḳūḳ 1382-1399.
Obverse: *Ḍuri*[*ba*] */ bi-ʾl-Ḳāhir*[*ā*].
Reverse: *As-Sulṭān al-Malik / aẓ-Ẓāhir ... /....*
Bronze; 20.00 mm.

302. 195 (DAJ - B. 1:4/5). Al-Ashraf Sayf al-Din Iynāl, 1453-1461.
Obverse: [اشرف]لملك الا[ا] / لناصر اينال ا... [ا] / ....
Reverse: [ق]بدمش ... / [محم]مد رسول ... / ولا اله ... .
Bronze.

Mamlūk (Dynasty unknown):

303. 285 (pl. 15.85) (DAJ - C.4:5). Ruler uncertain.
Obverse: ... / [الظاه]ر ركن الدنيا وال[دين] الملك / [الصا اح]ى / [الس]لطان.
Reverse: [حد] ابو العباس ا[ر...] / امي بامر لتن ... /...صزب; beneath, mint mark: m.
Bronze.

Plate 15.85 Coin 285.

304. 113 (DAJ - B.1:2). Ruler uncertain.
Obverse: Above: الناصر; arabesque beneath.
Reverse: Obliterated.
Bronze.

305. 199 (DAJ - C.1:6). Ruler uncertain.
Obverse: Overstruck traces of hexagram, dotted lines, and circle; right: ...ال[منصور].
Reverse: Obliterated.
Bronze.

306. 255 (DAJ - A.2:11, cistern). Ruler uncertain.
Obverse: Obliterated.
Reverse: Within small circle: ل / اينا; around, bottom [... الم[لك السل]طان].
Bronze.

307. 436 (DAJ - B.4:5, surface find). Ruler uncertain.
Obverse: Within oval: *Bin Ḥasan*; around: *As-Sulṭān al-Malik / al-Ashraf.*
Reverse: Within arabesque: *Ḍuriba / bi-Dimashḳ* / ...; double border (the outer dotted).
Bronze; 10.65 mm.

308. 912 (HAM 71.0582 - D.5:5F). Ruler uncertain. Similar to the preceding coin. Bronze; 16.61 mm; 2.44 gr.

309. 953 (DAJ - D.6:33C). Ruler uncertain. Similar to the preceding coins. Bronze. 10.88 mm.

310. 1520 (HAM 73.0235 - A.6:4). Ruler uncertain.
Obverse: .../ *Ḍuriba bi-Dimashḳ*; traces of border.
Reverse: Obliterated.
Bronze; 15.20 mm; 1.40 gr.

311. 1741 (HAM 74.0087 - B.7:10). Ruler uncertain.
Obverse: *Allah* (continuation of second line) */wa mā an-naṣr* [*īllā min ʿind*] (continued as the first line) */ lā īlah īllā* [*ʾllah Muḥammad*] / ....; traces of border.
Reverse: ... / *Nāṣir ad-Dunyā* [*wa*] / *ʾd-Dīn Muḥammad Bin Ḳa*[*lāūn*] / ....
Bronze; 20.24 mm; 2.67 gr.

312. 1960 (HAM 74.0285 - A.9:34), Half-*dirham.* Ruler uncertain. Similar to coin no. 281.
Obverse: .../... *īllā ʾllah Muḥammad / ...Allah ārsalahu / ...*
Reverse: *Aẓ-Ẓāhir ... / as-Sulṭān al-Malik / ...*
Silver; 18.51 mm; 0.91 gr.

313. 512 (HAM 71.0568 - B.2:1). Ruler uncertain. Bronze; 16.72 mm; 1.18 gr.

314. 513 (DAJ - C.4:11). Ruler uncertain. Bronze; 10.67 mm.

315. 516 (HAM 71.0788 - D.6:5). Ruler uncertain. Bronze; 20.62 mm; 2.45 gr.

316. 562 (DAJ - D.5:6). Ruler uncertain. Bronze; 20.00 mm.

317. 603 (HAM 71.0573 - C.5:3). Ruler uncertain. Bronze; 19.80 mm; 3.11 gr.

318. 913 (HAM 71.0583 - D.5:5A). Ruler uncertain. Bronze; 16.84 mm; 2.46 gr.

319. 940 (HAM 71.0587 - D.5:5E). Ruler uncertain. Bronze; 17.26 mm; 1.95 gr.

320. 944 (HAM 71.0589 - D.6:33C). Ruler uncertain. Bronze; 17.53 mm; 1.66 gr.

321. 948 (HAM 71.0591 - D.6:33C). Ruler uncertain. Bronze; 17.03 mm; 1.69 gr.

322. 949 (HAM 71.592 - D.6:33C). Ruler uncertain. Bronze; 18.82 mm; 1.92 gr.

323. 951 (HAM 71.0593 - D.6:33C). Ruler uncertain. Bronze; 16.11 mm; 2.55 gr.

324. 1021 (DAJ - C.5:3). Ruler uncertain. Bronze; 10.91 mm.

325. 1023 (DAJ - D.5:5D). Ruler uncertain. Bronze; 10.83 mm.

326. 1024 (DAJ - D.5:5F). Ruler uncertain. Bronze; 10.80 mm.

327. 1030 (HAM 71.0610 - D.5:5F). Ruler uncertain. Bronze; 12.71 mm; 1.33 gr.

328. 1082 (HAM 71.0613 - D.6:33B). Ruler uncertain. Bronze; 17.26 mm; 2.28 gr.

329. 1083 (HAM 71.0614 - D.6:33B). Ruler uncertain. Bronze; 13.66 mm; 0.75 gr.

330. 1084 (DAJ - D.6:33H). Ruler uncertain. Bronze; 10.82 mm.

331. 1085 (HAM 71.0615 - D.6:33H). Ruler uncertain. Bronze; 18.16 mm; 0.55 gr.

332. 1089 (HAM 71.0618 - D.6:33E). Ruler uncertain. Bronze; 16.14 mm; 2.33 gr.

333. 1098 (HAM 71.0625 - D.5.5F). Ruler uncertain. Bronze; 20.40 mm; 1.91 gr.

334. 1099 (HAM 71.0626 - D.5:5F). Ruler uncertain. Bronze; 19.38 mm; 2.91 gr.

335. 1140 (HAM 71.0630 - D.6:33E). Ruler uncertain. Bronze; 18.95 mm; 1.06 gr.

336. 2469 (HAM 76.0261 - C.6:45). Ruler uncertain. Bronze; 17.39 mm; 1.73 gr.

337. 2664 (HAM 76.0430 - C.9:14). Ruler uncertain. Bronze; 19.39 mm; 1.48 gr.

338. 2670 (HAM 76.0435 - A.11:11). Ruler uncertain. Bronze; 22.04 mm; 2.98 gr.

339. 2675 (HAM 76.0437 - F.34:4B). Ruler uncertain. Bronze; 19.24 mm; 2.34 gr.

340. 2879 (HAM76.0618 - K.1:4). Ruler uncertain. Bronze; 14.99 mm; 0.65 gr.

341. 2880 (HAM 76.0619 - C.9:37). Ruler uncertain. Bronze; 20.04 mm; 1.34 gr.

342. 2881 (HAM 76.0620 - G.15:20). Ruler uncertain. Bronze; 21.20 mm; 2.12 gr.

Ottoman?

343. 1142 (HAM 71.0631 - D.6:33H). Ruler uncertain. Bronze; 13.73 mm; 0.54 gr.

Too Worn:

344. 108 (HAM 68.0132 - A.3:1). Bronze; 10.62 mm; 0.83 gr.

345. 109 (HAM 68.0133 - A.1:14). Bronze; 12.20 mm; 1.04 gr.

346. 110 (HAM 68.0134 - A.1:11). Bronze; 11.02 mm; 1.15 gr.

347. 112 (HAM 68.0136 - A.1:14). Bronze; 12.84 mm; 0.71 gr.

348. 119 (HAM 68.0139 - C.1:1). Bronze; 17.59 mm; 1.09 gr.

349. 123 (HAM 68.0140 - C.1:4). Bronze; 21.04 mm; 2.12 gr.

350. 124 (HAM 68.0141 - C.1:4). Bronze; 27.09 mm; 1.76 gr.

351. 126 (HAM 68.0142 - C.1:5). Bronze; 15.05 mm. 1.37 gr.

352. 128 (HAM 68.0143 - C.1:5). Bronze; 15.02 mm; 0.87 gr.

353. 129 (HAM 68.0144 - C.2:1). Bronze; 18.96 mm; 3.17 gr.

354. 133 (HAM 68.0146 - C.2:1). Bronze; 14.00 mm; 2.03 gr.

355. 135 (HAM 68.0147 - D.2:6). Bronze; 22.11 mm; 3.69 gr.

356. 136 (HAM 68.0148 - D.2:1). Bronze; 10.88 mm; 1.03 gr.

357. 137 (HAM 68.0149 - D.2:1). Bronze; 13.50 mm; 0.95 gr.

358. 138 (HAM 68.0150 - D.3:2). Bronze; 20.52 mm; 2.00 gr.

359. 140 (HAM 68.0151 - D.3:5). Bronze; 18.47 mm; 1.57 gr.

360. 192 (HAM 68.0181 - A.1:13). Bronze; 12.04 mm; 1.12 gr.

361. 194 (HAM 68.0190 - C.4:4). Bronze; 11.72 mm; 0.89 gr.

362. 196 (HAM 68.0189 - C.1:5). Bronze; 16.00 mm; 3.62 gr.

363. 198 (HAM 68.0188 - C.1:6). Bronze; 18.00 mm; 0.98 gr.

364. 205 (HAM 68.0186 - A.2:11). Bronze; 19.10 mm; 2.50 gr.

365. 207 (HAM 68.0304 - C.3:7). Bronze; 21.70 mm; 2.00 gr.

366. 220 (HAM 68.0199 - C.4:1). Bronze. 19.61 mm; 1.80 gr.

367. 221 (HAM 68.0200 - A.4:8). Bronze; 10.96 mm; 1.12 gr.

368. 222 (HAM 68.0201 - C.1:6). Bronze; 14.61 mm; 0.75 gr.

369. 248 (HAM 68.0212 - B.1:10). Bronze; 13.91 mm; 0.53 gr.

370. 250 (HAM 68.0213 - A.3:16). Bronze; 10.48 mm; 0.71 gr.

371. 251 (HAM 68.0214 - C.4:3). Bronze; 13.44 mm; 0.82 gr.

372. 252 (HAM 68.0215 - A.3:11). Bronze; 11.77 mm; 0.81 gr.

373. 257 (HAM 68.0217 - D.2:13). Bronze; 15.14 mm; 1.56 gr.

374. 277 (HAM 68.0225 - C.1:6). Bronze; 18.64 mm; 2.80 gr.

375. 289 (HAM 68.0232 - A.4:15). Bronze.

376. 328a (HAM 68.0289 - A.1:5). Bronze; 12.86 mm; 3.21 gr.

377. 329a (HAM 68.0291 - C.4:7). Bronze; 16.96 mm; 0.92 gr.

378. 389 (HAM 71.0533 - A.2, clean-up). Bronze; 18.77 mm; 1.49 gr.

379. 413 (HAM 71.0536 - A.5:1). Bronze; 15.23 mm; 0.58 gr.

380. 524 (HAM 71.0800 - B.2:1). Bronze; 13.17 mm; 1.64 gr.

381. 535 (HAM 71.0801 - D.1:36). Bronze; 8.56 mm; 0,52 gr.

382. 540 (HAM 71.0802 - D.6:16). Bronze; 13.60 mm; 1.84 gr.

383. 545 (HAM 71.0803 - F.5:?). Bronze; 11.54 mm; 1.08 gr.

384. 548 (HAM 71.0571 - B.1:17). Bronze; 16.94 mm; 2.17 gr.

385. 584 (HAM 71.0804 - D.5:6). Bronze; 11.31 mm; 0.90 gr.

386. 661 (HAM 71.0577 - C.5:3). Bronze; 14.94 mm; 1.04 gr.

387. 938 (HAM 71.0585 - D.5:5E). Bronze; 17.88 mm; 0.61 gr.

388. 946 (HAM 71.0590 - D.6:33C). Bronze; 16.37 mm; 2.07 gr.

389. 1012 (HAM 71.0596 - C.1, clean-up). Bronze; 13.83 mm; 0.69 gr.

390. 1013 (HAM 71.0597 - C.1, clean-up). Bronze; 0.93 gr.

391. 1016 (HAM 71.0600 - C.3, clean-up). Bronze; 14.06 mm; 0.36 gr.

392. 1017 (HAM 71.0601 - C.4, clean-up). Bronze; 15.42 mm; 0.91 gr.

393. 1022 (HAM 71.0604 - D.2E, Balk Trim). Bronze; 14.60 mm; 0.68 gr.

394. 1025 (HAM 71.0605 - D.5:5F). Bronze; 19.31 mm; 2.72 gr.

395. 1026 (HAM 71.0606 - D.5:5F). Bronze; 21.32 mm; 3.06 gr.

396. 1027 (HAM 71.0607 - D.5:5F). Bronze; 18.39 mm; 3.24 gr.

397. 1028 (HAM 71.0608 - D.5:5F). Bronze; 19.44 mm; 2.53 gr.

398. 1029 (HAM 71.0609 - D.5:5F). Bronze; 22.21 mm; 2.44 gr.

399. 1088 (HAM 71.0617 - D.6:33E). Bronze; 23.34 mm; 3.11 gr.

400. 1092 (HAM 71.0621 - D.6:33F). Bronze; 19.58 mm; 2.29 gr.

401. 1516 (HAM73.0231 - A.7:5). Bronze; 17.80 mm; 3.88 gr.

402. 1649 (DAJ - D.6:56C). Bronze; 12.00 mm.

403. 1733 (HAM 74.0079 - C.3:59). Bronze; 18.08 mm; 2.89 gr.

Historical Analysis

An understanding of the occupational history of Hesban would gain little if the coins were catalogued without being subjected to a historical analysis that leads to some conclusions.

Coins are history incarnate. Coins (nos. 1 and 2) were the oldest found at Hesban, dating from 246-221 B.C., belonging to the reign of Ptolemy III Euergetes.

Of particular interest to Bible students are the coins related to ancient Palestine. A *leptos* of Pontius Pilate (no. 49) is reminiscent of the widow's mite in Mark 12:41-44. Although minted somewhat later, other coins familiar to Bible students include a *denarius* or *drachma* (no. 51) of Trajan (A.D. 98-117) and a *statēr* or *tetradrachma* (no. 53) of Caracalla (A.D. 211-217). The *dēnarion* was the ordinary pay for a day's work (Matt 20:2, 9, 10, 13). It was worth 18 cents, devalued to 8 cents during the reign of Nero (A.D. 54-68). Revelation 6:6 may betray the inflationary prices of a later time when about a quart of wheat was sold for a *denarius*; *cf.* Mark 6:37; Matt 14:21, where a the coin is estimated as enough to buy bread for more than 25 people. The *statēr* (tribute money, cf. Matt 22:19), was the equivalent of four *denarii* or a *shekel*, and used for paying the temple dues for two individuals (Matt 17:27).

Some coins are rather rare, e.g., a Nabataean *leptos*, (no. 36) of the long-haired Rabbel II (A.D. 71-106), two procuratorial *lepta* of Judaea, (nos. 45, 46), an Aelia Capitolina *Sestertius* (no. 57) from the joint principate of Marcus Aurelius and Lucius Verus (A.D. 161-169), the reverse showing Astarte

in her temple which stood at the site in Jerusalem later occupied by the Church of the Holy Sepulcher, and a *sestertius* (no. 70) of Herennius Etruscus (ca. A.D. 250). Coin no. 69 is an odd specimen of Philip I (A.D. 243-249). It bears no marks of circulation. Moreover, the wide and raised margin, coupled with unusual thickness, gives it the appearance of a medallion (if not an ancient imitation).

A *sestertius* of Antoninus Pius (no. 54) commemorates the founding of Aelia Capitolina by Hadrian in A.D. 135 on the site of ancient Jerusalem, following the suppression of the Bar Kochba revolt (A.D. 132-135). Another coin (no. 65) showing Mount Gerizim with a shrine atop is a *sestertius* of Neapolis in Samaria, one mile west of ancient Shechem.

Of the Roman provinicial coins, no. 64 is of particular interest because of the rarity of its type. The reverse, showing a cart with domed canopy supported by four pillars and drawn right by four horses, appears only among the coins of Philadelphia (Amman) from the time of Aurelius to Commodus (second half of the second century A.D). However, the specimen from Hesban differs somewhat from the two known types (Hill 1922: 39, 41, nos. 11, 20), and its attribution to Philadelphia cannot be determined with certainty because of the illegible inscription.

Coin (no. 60), along with the two Esbus coins (nos. 67 and 68), are the only mention of the ancient mints of Transjordan. It is a coin of *Arabia Provincia*, founded in A.D. 106, after the fall of the Nabataean Kingdom. The coin was released during the reign of Hadrian (A.D. 117-138) and was probably struck at Bostra, which at first issued coins for the entire province with the province name APABIA on the reverse (Hill 1922: 22-44, nos. 14-44). Two Umayyad *fils* (nos. 148 and 159) were struck at *Aelia* (Jerusalem), and Ayyūbid coin no. 178 was struck at Cairo, as were many of the Mamlūk *dirhams,* although coin no. 234 was struck at Damascus. Among the Mamlūk *fulūs*, coin no. 285 was struck at Tripoli (Lebanon), but several other coins (nos. 195, 282, 286, 294-99, 302, 307-9) were struck at Damascus.

Many of the Islamic coins are mutilated and worn almost beyond recognition. Some are only part of a coin. Islamic copper coinage had a poor start and continued the same way, despite the enviably excellent *dinars* that were struck on occasion. Of particular interest are the coins of the Byzantine-Islamic transition and the barbarous imitations of Imperial Roman coinage (Kirkbride 1947: 59-63; Walker 1956: xv-liii). Of the Islamic coins one of surpassing interest (no. 148) has come to light. It is a pictorial-type Umayyad *fils* issued prior to the monetary reform of ʿAbd al-Malik Ibn Marwān (696/97). The postreform coins have only an inscription, in keeping with the principles of Islam. A few Umayyad coins from Spain and rare ʿAbbāsid specimens are among the exceptions. Pictorial-type Islamic coins reappeared among the Turkomen, and were frequently issued by the Mongol dynasties descended from Genghis Khan (d. 1227).

Two other Islamic coins are of special interest: no. 147 is an Umayyad pictorial coin of ʿAbd al-Malik ibn Marwān (A.D. 685-705), the fifth Umayyad caliph, known for his monetary reforms (see above) and the erection of the Dome of the Rock at the temple mount in Jerusalem. It shows the caliph standing in Byzantine style; a number of other Byzantine derivations are also noticeable (cf. Walker 1956: 32, no. 104). The other coin (no. 166) is a poorly preserved Abbasid silver coin (*dirham*) from the early tenth century. It was the only ʿAbbāsid coin found at Hesban and must be correlated with the few other ʿAbbāsid finds from the tell in order to account for this very poorly represented period in the occupational history of the site. The fact that ʿAbbāsid coins at Hesban are almost nonexistent is not to be taken as an indication of lack of occupation during that period. Their extreme scarcity could partly be due to the fact that these coins are predominantly silver, a commodity well sought by succeeding generations.

The religious element is prominent in Islamic coinage. Many of these coins bear the Moslem profession of faith, either in part or in whole (Koran ix.33): “There is no god but God (no. 153) alone (nos. 149-51); He has no associate” (no. 152). Others bear the continuation of the text, usually on the reverse: “Mohammed is the apostle of God” (nos. 149-54, 210, 302), whom He sent with guidance, (no. 207) and the religion of truth to make it prevail over all other religions” (no. 287). Another text quoted from the Koran (cxii. 1-3) on coins is “God is one; God is the eternal; He begets not, neither is He begotten” (no. 152, reverse). Other inscriptions include the following designations preceding the rulers’ names: “the sultan” (nos. 194, 292), “the king,” (nos. 168, 183, 187, 302), “the Sultan, the King,” (nos. 210, 275, 282, 287, 303, 306), “the Imam” (nos. 183, 187, 193). Several

adjectival names either precede or follow that of the rulers. Due caution is necessary, as adjectival names may easily lead to misidentifications. Another common designation on the reverse reads: "In the name of God; this *fils* was struck at ... in the year ...."

Like Poole (1879: 21-27), we have endeavored to discover some kind of system of weights in terms of the Mamlūk coins, without much success. The *dirhams* of Bibars from the hoard range from 2.10-3.39 grams, averaging 2.73 grams, and the half-*dirhams* from 0.84-2.37 grams, with an average of 1.54 grams. But when the three reverse types (A-C) of the half-dirhams are considered separately, the range is not so broad. Type A (nos. 242, 246, 251, 253, 256-58, 262, 265-66, 268 and 273) range from 0.84-1.55 grams, averging 1.20 grams; Type B (nos. 249, 260-61, 263-64, 267, 269-70 272, and 274) from 0.99-1.69 grams, averaging 1.42 grams; and Type C (nos. 243-45, 247-48, 250, 252, 254-55, 259 and 271) from 1.05-2.37 grams, and average 1.60 grams.

The *dirhams* of Bibars present a variety of obverses but only one type of reverse. The obverse types are of little help to ascertain their chronology since all the datable ones are the same. The rest are represented by a few specimens that do not warrant a comparative study. The half-*dirhams* also present a variety of obverses, but three types of reverses emerge (A-C). There are 12, 10, and 11 coins respectively. This distribution enables a study of their weight system to determine which of the three types is the oldest (assuming the simple principle that coins longer in circulation lost more of their weight than those with a shorter period of circulation). In the absence of dates on the half-*dirhams*, an application of this metrological theory is appropriate to ascertain the chronology of the three types. It indicates that at the time when the coins were hoarded, Type A had lost about 25% of its weight and Type B about 12% of its weight in comparison with Type C. The comparison suggets that Type A is chronologically the earliest. Aside from the metrological evidence, the clustering of *tituli* from *al-Malik aẓ-Ẓāhir* in Type A, to *as-Sulṭān* (Bibars was the first Mamlūk ruler to use this title on coins) al-Malik *aẓ-Ẓāhir* in Type B, and to *as-Sulṭān al-Malik aẓ-Ẓāhir Rukn ad-Dunyā wa ᵓd-Dīn Bibars Ḳasīm Amīr al-Muᵓminīn* in Type C (though the latter appears on the earliest dirhams) is noteworthy.

Like the rest of the Ayyūbid and Mamlūk coins from the various strata, the hoard makes it evident that the Ayyūbid coins were almost driven out circulation by the Mamlūk coins soon after the rise of the Baḥrī Dynasty in the middle of the 13th century (note the ratio of 1 to 65 in terms of the hoard). The Ayyūbid coin (no. 178) dates from 1246/47 and the latest datable Mamlūk coins, (nos. 223, 230), are from 1268/69, suggesting that the hoard was last hidden sometime in the early 1270s.

Table 15.1 illustrates the wide distribution of the 403 coins found at Hesban. The hypothesis that some coins could have enjoyed several centuries of circulation applies at best to gold coins. The grouping of coins at certain centuries and their apparent absence in the intervening 9th-12th centuries are noteworthy. There are no coins from after the 15th cent. A.D. with the possible exception of the somewhat doubtful Ottoman coin (no. 343).

Table 15.1 Coin Distribution by Century.

third century B.C.	+
second century B.C.	+
first century B.C.	+
first century A.D.	+
second century A.D.	+
third century A.D.	+
fourth century A.D.	+
fifth century A.D.	+
sixth century A.D.	+
seventh century A.D.	+
eighth century A.D.	+
ninth century A.D.	
10th century A.D.	
11th century A.D.	
12th century A.D.	+
13th century A.D.	+
14th century A.D.	+
15th century A.D.	+

At this juncture it is interesting to compare Table 15.1 with the references to Hesban in the literary sources (Vyhmeister 1968: 158-77; 1989: 1-23). References in the works of Josephus (*Ant* 12.4.2; 13.15.4; 15.8.5; *JW* 2.18.1; 3.3.3) extend from the second century B.C. to the first century A.D. There are documented references to the city in every succeeding century until the middle of the seventh century. Ptolemy *Geog* 5.17 (A.D. 130-60); coins of Elagabalus (A.D. 218-222) (see above); Roman Milestones 5 and 6, the Esbus-Livas road (A.D. 219, 236, 288, 364-75); the

Council of Nicaea (A.D. 325); Eusebius' *Onom* 84:1-6; the pilgrim Etheria of Aquitania (ca. A.D. 400); the Councils of Ephesus (A.D. 431) and Chalcedon (A.D. 451); Notita Antiochena (ca. A.D. 570); a capital in Ras es-Siagha church (ca. A.D. 590); in Georges of Cyprus (ca. A.D. 605); the letters of Pope Martin I (A.D. 649); and the Mosaic of Maʿin (6th-8th centuries). Esbus then disappears from the literary sources, only to reappear in its Arabic form as Ḥesbân. The earliest Arabic reference, however, derives form the writings of Abū Ḏjaʿfar Muḥammad aṭ-Ṭabarī (839-923). He mentions Ḏjabal (Mount) Ḥesbân in recounting Israelite history (Vyhmeister 1968: 171), citing a letter from Fritz Steppat, Director of Orient-Institut der Deutschen Morgenländischen Gesellschaft, Beirut, Jan. 2, 1967. It is doubtful that this scant reference speaks of a contemporary city; it speaks rather of a tell. The next Arabic reference clearly indicates the existence of a Ḥesbân village in 1184 (Vyhmeister 1968: 171, citing Behâ Ed-Dîn, *The Life of Saladin* [London, 1897: 97]). This reveals a renewed beginning at the end of the 12th century. It is exactly the same period of restoration as indicated through the coin evidence. References to the city are abundant during the Baḥrī Dynasty of the Mamlūks (1250-1382) (Vyhmeister 1968: 172-73, citing: ha-Parchi (ca 1314), Sanuto (ca. 1321), Abu el-Feda (d. 1331), Dimisqi (d. 1327), al-ʿUmari (1301-1348), Qalqašandī, and aẓ-Ẓahirī. They disappear again at the close of the 14th century, at about the time of the latest coins found at Tell Hesban.

The Hesban coins represent an extensive geographical range of provenance. But it is rather strange that except for the Nabataean coins (nos. 16-43) which were presumably struck at Petra (Hill 1922: 12) (see also coin no. 63), there are no apparent indications of coins struck at the ancient mints of Transjordan. After the fall of the Nabataean Kingdom and the founding of *Arabia Provincia* in A.D. 106, several cities issued coinage locally, especially Bostra, which at first issued coins for the entire province (Hill 1922: 22-24, nos. 14-44). These coins did not bear a mint name, but carried the province name, Arabia, on the reverse. Like the neighboring cities of Madaba, Philadelphia (Amman), and Gerasa (Jerash), Esbus had its city coinage for a considerable period under Roman occupation (see coin nos. 67-68). Moreover, of the Byzantine mints that came into the possession of the Muslims, the Amman forge continued to beat Islamic coins throughout the Umayyad (661-750) and the ʿAbbāsid (750-1258) periods (Nassar 1948: 121-22, n. 4). It should be cautioned that Umayyad coins bearing the mint-name الاردن (Jordan) were struck at Tiberias, capital of the Jordan Province (Walker 1956: 228, n. 2), though none of these coins was found.

Generalizations must be made cautiously when we bear in mind the ratio of coins to the number of centuries. For example, the third century A.D. cannot be dismissed as an insignificant period in Hesban's history merely because only two Esbus coins (nos. 67, 68) were found. These coins were minted during the reign of Elagabalus (A.D. 218-222) who elevated the city to municipal status (Avi-Yonah 1966: 117). The Esbus-Livias road was well traversed, as the inscriptions on the Roman Milestones 5 and 6 indicate. Likewise, the seventh century yielded only two coins (nos. 118, 147) with specific rulers, but this does not negate the fact that a prosperous city existed at that time, flourishing in the glamor of its important bishopric.

The co in evidence, the pottery, and the historical sources make it clear that the city was devastated sometime during the eighth century A.D. Vyhmeister (1969: 171) suggests that it could have been destroyed during a war that affected the Balqā in ca. 790. The strife was between the former subjects of the Umayyads (661-750) and the new ʿAbbāsid (750-1258) rulers. It was particularly bitter during the governorship in Damascus of a certain Ibrāhīm (ca. 790). However, it is doubtful that this conflict could have been so destructive, and only one ʿAbbāsid coin (no. 166) has been found at Hesban. On the other hand, a devastating earthquake, that shook all of Palestine and Transjordan, occurred in 747 (130 A.H). The Church of the Holy Sepulchre, in Jerusalem, Khirbat al-Mafjar, near Jericho, and Jerash with its magnificent churches, were among the numerous places destroyed at that time. It is very likely that Hesban was destroyed at that time and then abandoned for nearly four centuries. This does not rule out the possibility that there were either short periods of nomadic settlement or a lengthy sparse occupation during the 9th-12th centuries. During the 13th-14th centuries the city experienced another revival, as evidenced by the comparatively larger number of Mamlūk coins. The latest of these derive from the first half of the 15th century, at about the very time when Hesban seems to have faded from history.

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Appendix

HESBAN OBJECT LIST

Appendix

Hesban Object List

Object No	Locus	Material	Description	Period	Allocation
0001	C.1:11:5	Ceramic	Spindle Whorl		HAM68.0035
0002	B.1:2:11	Stone	Gaming Piece		HAM68.0036
0003	B.1:1:6	Iron	Knife Blade		HAM68.0056
0004	C.1:1:1	Iron	Nail		HAM68.0057
0005	B.1:1:5 I	Iron	Nail		HAM68.0058
0006	B.1:1:6	Bronze	Cosmetic Rod		HAM68.0059
0007	C.1:1:3	Bronze	Ring		HAM68.0060
0008	C.1:1:1	Iron	Pin Head		HAM68.0061
0009	A.2:5:11	Copper	Cap		HAM68.0062
0010	A.2:5:11	Bronze	Cosmetic Spatula		DAJ
0011	C.1:1:1	Iron	Hook		HAM68.0063
0012	A.2:5:11	Copper	Scale Armor?		HAM68.0064
0013	A.2:1:10	Copper	Hook		HAM68.0065
0014	A.2:1:5	Bronze	Blade Point		HAM68.0066
0015	C.2:1:1	Bronze	Chain		HAM68.0067
0016	C.2:1:2	Copper	Ring		HAM68.0068
0017	B.1:1:2	Bronze	Ring		HAM68.0069
0018	C.1:1:1	Bronze	Ring		HAM68.0070
0019	D.3:1:1	Iron	Nail		HAM68.0071
0020	B.1:2:16	Iron	Nail Head		HAM68.0072
0021	C.2:1:10	Iron	Nail		HAM68.0073
0022	A.2:6:14	Iron	Hook		HAM68.0074
0023	B.1:4-5:27	Iron	Nail		HAM68.0075
0024	C.1:1:7	Iron	Nail		HAM68.0076
0025	B.1:4-5:26	Iron	Nail		HAM68.0077
0026	D.2:1:9	Bronze	Chain		HAM68.0078
0027	B.1:4:27	Iron	Hook		HAM68.0079
0028	A.2:5:11	Faience	Bead		HAM68.0080
0029	C.1:1:8	Glass	Bead		HAM68.0081
0030	B.1:1:4	Bronze	Pendant		HAM68.0082
0031	C.2:1:11	Stone	Bead		—
0032	A.1:1:1	Bone	Ornament		HAM68.0083
0033	C.1:4:13	Glass	Bead		HAM68.0084
0034	C.1:4:13	Glass	Bead		HAM68.0085
0035	A.1:2:1	Stone	Vessel Fragment		HAM68.0037
0036	C.1:1:8	Basalt	Quern Fragment		—
0037	A.4:1:4	Glass	Bead		HAM68.0086
0038	B.1:22:5	Stone	Weight		HAM68.0038
0039	C.2:26:7	Stone	Weight		HAM68.0039
0040	C.1:4:14	Bone	Worked Bone		DAJ
0041	B.1:13:1	Stone	Vessel Fragment		HAM68.0040
0042	C.1:2:21	Bronze	Kohl Stick		HAM68.0087
0043	A.3:1:5	Iron	Nail		HAM68.0088
0044	C.1:4:15	Iron	Nail		HAM68.0089
0045	C.1:2:21	Bronze	UD		HAM68.0090

0046	C.1:4:14	Bronze	UD		HAM68.0091
0047	A.4:1:7	Iron	Needle		HAM68.0092
0048	D.2:1:1	Bronze	Bell		HAM68.0093
0049	C.1:4:19	Copper	Ring		HAM68.0094
0050	C.2:7:35	Lead	Pendant		HAM68.0095
0051	C.1:4:18	Bronze	Kohl Stick		HAM68.0096
0052	C.1:4:20	Iron	Nail		HAM68.0097
0053	C.2:8:32	Iron	Spike		HAM68.0098
0054	B.1.4-5:34	Stone	Slingstone		DAJ
0055	C.2:6:18	Stone	UD		HAM68.0099
0056	C.1:4:22	Glass	Bead		HAM68.0100
0057	C.1:4:28	Glass	Bead		HAM68.0101
0058	C.1:5:30	Glass	Bead		HAM68.0102
0059	C.1:5:34	Glass	Bead		HAM68.0103
0060	C.1:5:34	Glass	Bead		HAM68.0104
0061	C.1:4:25	Ivory	UD		HAM68.0105
0062	C.1:4:27	Bone	Spindle		DAJ
0063	D.1:1:17	Bone	UD		HAM68.0106
0064	B.1:2:19	Basalt	Millstone Fragment		—
0065	B.1:4-5:27	Limestone	Door Socket		—
0066	A.1:16:5	Stone	Pestle		HAM68.0041
0067	A.1:2:25	Limestone	Door Socket		—
0068	A.4:1:18	Glass	Bead		HAM68.0107
0069	C.1:1:40	Glass	Spindle Whorl		HAM68.0108
0070	C.1:5:42	Faience	Bead		HAM68.0109
0071	D.1:20:6	Ceramic	Weight		HAM68.0042
0072	C.1:5:33	Lead	Ring		HAM68.0110
0073	C.2:3:63	Bronze	Ring		HAM68.0111
0074	C.1:5:38	Bone	Doll Head		DAJ
0075	C.1:4:15	Stone	Platter		HAM68.0112
0076	C.1:2:28	Bronze	UD		HAM68.0113
0077	C.1:4:27	Bronze	Kohl Stick		HAM68.0114
0078	C.1:5:39-42	Bone	Worked Bone		HAM68.0115
0079	C.1:22:4	Bronze	Cosmetic Spoon		DAJ
0080	C.1:5:35	Iron	Buckle		HAM68.0116
0081	C.1:5:38-41	Bone	Pendant		HAM68.0117
0082	C.1:4:52	Bronze	Kohl Stick		HAM68.0118
0083	C.1:4:52	Bronze	Kohl Stick		DAJ
0084	D.3:5:12	Bronze	Fibula		HAM68.0119
0085	A.3:1:13	Iron	Hook		HAM68.0120
0086	C.2:8:49	Bronze	Kohl Stick		HAM68.0121
0087	A.4:1:13	Bronze	Hook		HAM68.0122
0088	C.2:8:43	Bronze	Cosmetic Rod		HAM68.0123
0089	C.1:4:27	Bronze	Kohl Stick		HAM68.0124
0090	C.1:4:27	Bronze	Kohl Stick		DAJ
0091	C.1:4:27	Bronze	Kohl Stick		DAJ
0092	C.1:5:46	Bronze	Bell		HAM68.0125
0093	C.2:8:50	Stone	Tesserae		HAM68.0043
0094	C.2:9:55	Ceramic	Vase		DAJ
0095	A.1:3:33	Ceramic	Lamp	Islamic	DAJ
0096	D.2:4:17	Basalt	Millstone Fragment		—
0097	D.2:4:18	Limestone	Architectural Fragment		—
0098	C.1:5:59	Glass	Bead		HAM68.0126
0099	C.1:4:58	Faience	Bead		HAM68.0127
0100	A.3:8:32	Glass	Bead		HAM68.0128
0101	A.1:4:34	Ceramic	Incised Sherd		HAM68.0129
0102	C.1:59:5	Bone	Worked Bone		HAM68.0044
0103	A.2:Dump	Bronze	Coin	Umayyad	HAM68.0130

0104	A.1:1:10	Bronze	Coin	Umayyad	DAJ
0105	A.1:1:DUMP	Bronze	Coin	Byzantine	DAJ
0106	A.2:6:14	Bronze	Coin	Mamluk	HAM68.0131
0107	A.1:5:21	Bronze	Coin	Umayyad	DAJ
0108	A.3:1:16	Bronze	Coin		HAM68.0132
0109	A.1:14:39	Bronze	Coin		HAM68.0133
0110	A.1:11:37	Bronze	Coin		HAM68.0134
0111	A.1:13:40	Bronze	Coin	Byzantine	HAM68.0135
0112	A.1:14:40	Bronze	Coin		HAM68.0136
0113	B.1:2:9	Bronze	Coin	Mamluk	—
0114	B.1:1:5	Silver	Coin	Mamluk	DAJ
0115	B.1:33:5-4	Bronze	Coin	Byzantine	DAJ
0116	B.1:2:12	Bronze	Coin	Mamluk	DAJ
0117	B.1:1:4	Bronze	Coin	Byzantine	HAM68.0137
0118	C.1:4:14	Bronze	Coin	Umayyad	HAM68.0138
0119	C.1:1:9	Bronze	Coin		HAM68.0139
0120	C.1:4:14	Bronze	Coin	Mamluk	DAJ
0121	C.1:2:28	Bronze	Coin	Ayyubid	DAJ
0122	C.1:2:28	Bronze	Coin	Ayyubid	DAJ
0123	C.1:4:26	Bronze	Coin		HAM68.0140
0124	C.1:4:29	Bronze	Coin		HAM68.0141
0125	C.1:5:31	Bronze	Coin	Byzantine	DAJ
0126	C.1:5:31	Bronze	Coin		HAM68.0142
0127	C.1:31:5	Bronze	Coin	Umayyad	DAJ
0128	C.1:5:42	Bronze	Coin		HAM68.0143
0129	C.2:1:5	Bronze	Coin		HAM68.0144
0130	C.1:1:40	Bronze	Coin	Hellenistic?	DAJ
0131	C.2:1:4	Bronze	Coin	Mamluk	DAJ
0132	C.2:1:5	Bronze	Coin	Ayyubid	HAM68.0145
0133	C.2:1:4	Bronze	Coin		HAM68.0146
0134	C.2:28:6	Copper	Coin	Roman	DAJ
0135	D.2:6:26	Bronze	Coin		HAM68.0147
0136	D.2:1:3	Bronze	Coin		HAM68.0148
0137	D.2:1:3	Bronze	Coin		HAM68.0149
0138	D.3:2:10	Bronze	Coin		HAM68.0150
0139	D.1:19:1	Copper	Coin	Roman	DAJ
0140	D.3:5:12	Bronze	Coin		HAM68.0151
0141	C.2:7:24	Bronze	Coin	Roman	DAJ
0142	C.1:5:77	Limestone	Disc		HAM68.0152
0143	B.1:14A:65	Stone	Palette		HAM68.0045
0144	C.1:74:5	Chert	Slingstone		HAM68.0046
0145	D.2:4:37	Basalt	Door Socket		—
0146	D.1:14:44	Basalt	Quern Fragment		—
0147	B.1:14:57	Stone	Weight		HAM68.0153
0148	D.1:14:40	Plaster	Fragment		HAM68.0154
0149	B.1:15:62	Basalt	Bowl Rim		HAM68.0155
0150	C.2:9:92	Bone	Hairpin		HAM68.0156
0151	A.3:11:48	Plaster	Fresco Fragment		DAJ
0152	B.1:15:78	Frit	Egyptian Amulet	Iron Age	DAJ
0153	C.1:5:94	Bone	UD		HAM68.0157
0154	D.2:4:37	Bone	Spindle Fragment		DAJ
0155	C.3:1:4	Bronze	Bangle		DAJ
0156	C.2:9:86	Bronze	Cosmetic Rod		HAM68.0158
0157	C.2:9:78	Bronze	Kohl Stick		HAM68.0159
0158	D.2:4:37	Iron	Spike		HAM68.0160
0159	C.1:5:82	Iron	Nail		HAM68.0161
0160	C.3:1:1	Iron	Ring		HAM68.0162
0161	C.3:1:1	Brass	Button		DAJ

0162	A.1:15:44	Bronze	Hook		HAM68.0163
0163	C.1:4:72	Bronze	Kohl Stick		HAM68.0164
0164	C.1:5:71	Bronze	Kohl Stick		HAM68.0165
0165	C.1:6:98	Ivory	Ring Fragment		HAM68.0166
0166	C.1:65:5	Bronze	Kohl Stick		DAJ
0167	C.1:5:55	Bronze	Kohl Stick		HAM68.0167
0168	C.2:9:85	Bronze	Kohl Stick		HAM68.0168
0169	C.1:5:97	Brass	UD		HAM68.0169
0170	A.4:5:24	Iron	Ring		HAM68.0170
0171	D.3:9:40	Iron	Ring		HAM68.0171
0172	C.1:6:96	Brass	UD		HAM68.0172
0173	A.3:11:40	Stone	UD		HAM68.0173
0174	C.2:7:44	Bone	Spindle Whorl		HAM68.0174
0175	A.3:25:8	Bone	Weaving-pattern Spatula		HAM68.0047
0176	C.1:5:78	Coral	Bead		HAM68.0175
0177	C.3:1:1	Faience	Bead		HAM68.0176
0178	C.1:6:80	Glass	Bead		HAM68.0177
0179	C.1:6:98	Glass	Bead		HAM68.0178
0180	D.1:14:41	Stone	Gaming Piece		HAM68.0179
0181	A.1:15:46	Ceramic	Figurine	Iron	DAJ
0182	A.2:15:34	Limestone	Door socket		—
0183	B.1:14:86	Ceramic	Rhodian Jar Handle	Hellenistic	DAJ
0184	B.1:18:88	Ceramic	Loom Weight		HAM68.0180
0185	A.2:11:55	Iron	Knife Blade		HAM68.0185
0186	B.1:18:97	Copper	Scale Armor?		HAM68.0184
0187	C.3:1:5	Iron	Spatula		HAM68.0183
0188	A.2:9:18	Ceramic	Roof Tile		HAM68.0182
0189	A.1:12:57	Chert	Slingstone		DAJ
0190	A.2:11:55	Limestone	Mortar Fragment		—
0191	D.1:14:44	Basalt	Quern Fragment		—
0192	A.1:13:55	Bronze	Coin		HAM68.0181
0193	A.2:11	Bronze	Coin	Mamluk	DAJ
0194	C.4:4:37	Bronze	Coin		HAM68.0190
0195	B.1:5-4:21	Bronze	Coin	Mamluk	DAJ
0196	C.1:5:73	Bronze	Coin		HAM68.0189
0197	C.1:4:74	Bronze	Coin	Ayyubid	DAJ
0198	C.1:6:80	Bronze	Coin		HAM68.0188
0199	C.1:6:116	Bronze	Coin	Mamluk	DAJ
0200	C.2:5:71	Bronze	Coin	Byzantine	HAM68.0187
0201	B.1:14:79	Bronze	Coin	Roman	DAJ
0202	B.1:14:57	Bronze	Coin	Roman	HAM68.0290
0203	C.3:1:4	Bronze	Coin		—
0204	D.1:8:37	Bronze	Coin	Ayyubid	DAJ
0205	A.2:11:57	Bronze	Coin		HAM68.0186
0206	C.1:6:80	Bronze	Coin	Ayyubid	HAM68.0303
0207	C.3:7:13	Bronze	Coin		HAM68.0304
0208	C.2:6:109	Bronze	Earring		HAM68.0306
0209	D.3:9:48	Iron	Nail		HAM68.0191
0210	C.1:6:134	Bronze	Kohl Stick		HAM68.0192
0211	C.3:4:16	Ceramic	Inscribed Jar Rim		DAJ
0212	C.4:1:4	Basalt	Upper Millstone Fragment		—
0213	C.1:6:131	Ceramic	Stamped Jar Rim		DAJ
0214	C.1:6:135	Marble	Architectural Fragment		HAM68.0193
0215	D.1:11:53	Bronze	Ring		HAM68.0194
0216	D.1:14:44	Limestone	Bowl Rim		HAM68.0195
0217	C.2:6:111	Schist	Bowl Rim		HAM68.0196
0218	C.3:4:16	Stone	Pallette?		HAM68.0197
0219	C.1:6:139	Ceramic	Rim		HAM68.0198

0220	C.4:1:4	Bronze	Coin		HAM68.0199
0221	A.4:8:39	Bronze	Coin		HAM68.0200
0222	C.1:6:137	Bronze	Coin		HAM68.0201
0223	C.1:6:136	Bronze	Hairpin		DAJ
0224	C.1;6:136	Bronze	Kohl Stick		DAJ
0225	C.3:5:22	Chert	Slingstone		—
0226	C.1:6:150	Bronze	Cosmetic Rod		DAJ
0227	C.1:6:126	Glass	Bead		HAM68.0202
0228	C.3:4:21	Limestone	Pestle		HAM68.0203
0229	C.3:4:21	Steatite	Pendant		HAM68.0048
0230	C.1:6:164	Bronze	Hook		HAM68.0204
0231	D.1:10:58	Iron	Nail		HAM68.0205
0232	C.1:6:162	Iron	Nail		HAM68.0206
0233	A.2:5:	Basalt	Vessel Fragment		—
0234	A.1:2:25	Stone	Rubbing Stone		DAJ
0235	A.3:11-7:46	Plaster	Inscription on Plaster		DAJ
0236	A.4:16:59	Faience	Bead		HAM68.0207
0237	B.1:42:136	Bone	Weaving-pattern Spatula		HAM68.0208
0238	C.1:175:6	Bone	Handle		HAM68.0049
0239	B.1:42:136	Bronze	Garmrnt Pin		DAJ
0240	B.1:38:129	Bronze	Garment Pin		DAJ
0241	C.4:3:10	Ceramic	Buzz		HAM68.0209
0242	C.4:5:16	Granite	Pendant		HAM68.0210
0243	Surface	Ceramic	Vessel Fragment		HAM68.0050
0244	C.3:5:29	Limestone	Rubbing Stone		HAM68.0211
0245	B.1:140:39	Stone	Weight		HAM68.0051
0246	C.1:6:160	Basalt	Vessel Fragment		—
0247	B.1:4-5:22	Bronze	Coin	Byzantine	DAJ
0248	B.1:10:101	Bronze	Coin		HAM68.0212
0249	C.1:6:190	Bronze	Coin	Byzantine	DAJ
0250	A.3:16:69	Bronze	Coin		HAM68.0213
0251	C.4:3:8	Bronze	Coin		HAM68.0214
0252	A.3:11:62	Bronze	Coin		HAM68.0215
0253	A.3:11:52	Bronze	Coin	Byzantine	DAJ
0254	A.2:11:62	Bronze	Coin	Umayyad	DAJ
0255	A.2:11:64	Bronze	Coin	Mamluk	DAJ
0256	D.2:16:70	Bronze	Coin	Ayyubid	HAM68.0216
0257	D.2:13:71	Bronze	Coin		HAM68.0217
0258	D.3:9:51	Bronze	Coin	Ayyubid	DAJ
0259	C.1:6:190	Bronze	Kohl Stick		DAJ
0260	B.1:44:147	Ceramic	Spindle Whorl		HAM68.0218
0261	C.4:1:14	Iron	Spike		HAM68.0219
0262	D.3:11:66	Bronze	Cosmetic Spatula		DAJ
0263	B.1:17:144	Bone	Spindle Fragment		HAM68.0220
0264	D.1:3:73	Glass	Bead		HAM68.0221
0265	D.1:3:73	Coral	Bead		DAJ
0266	C.1:6:158	Ceramic	Zoomorphic Figurine Foot	Mamluk	HAM68.0222
0267	D.1:17:45?	Iron	Horseshoe		DAJ
0268	D.1:17:45?	Iron	Horseshoe		DAJ
0269	C.1:6:181	Basalt	Millstone		HAM68.0223
0270	C.4:1:16	Limestone	Door Socket		—
0271	C.4:5:13	Basalt	Basin		—
0272	D.2:15:83	Basalt	Bowl Fragment		—
0273	C.4:5:14	Ceramic	Handle		—
0274	C.3:6:43	Basalt	Quern Fragment		—
0275	C.3:43:6	Ceramic	Rhodian Jar Handle	Hellenistic	HAM68.0052
0276	C.1:6:203	Ceramic	Jar Rim		HAM68.0224
0277	C.1:6:161	Bronze	Coin		HAM68.0225

0278	D.1:10:58	Bronze	Coin	Umayyad	DAJ
0279	B.1:14:65	Iron	Nail		HAM68.0226
0280	C.4:7:25	Bronze	Cosmetic Rod		DAJ
0281	C.1:7:47	Faience	Bead		DAJ
0282	C.3:6:Balk	Bronze	Ring		HAM68.0227
0283	B.1:23:168	Ceramic	Buzz		HAM68.0053
0284	C.3:5:30	Ceramic	Inscribed Handle		HAM68.0228
0285	C.4:5:19	Bronze	Coin	Mamluk	DAJ
0286	B.1:17-25:164	Bronze	Ring		HAM68.0229
0287	C.3:2:38	Iron	Spike		HAM68.0230
0288	C.3:7:48	Stone	Weight		HAM68.0231
0289	A.4:15:47	Bronze	Coin		HAM68.0232
0290	C.4:5:19	Bronze	Coin	L. Roman	DAJ
0291	A.4:18:70	Bronze	Coin	Hellenistic	DAJ
0292	A.4:19:81	Bronze	Nail		HAM68.0233
0293	C.4:7:48	Copper?	UD		HAM68.0234
0294	C.1:6:200	Ivory?	Spindle Whorl		HAM68.0235
0295	D.1:31:78	Bronze	Coin	E. Roman	DAJ
0296	C.3:Balk	Bronze	Cosmetic Spatula		HAM68.0236
0297	C.4:7:23	Bronze	Ring		HAM68.0237
0298	D.1:28:80	Marble	Architectural Fragment		DAJ
0299	B.1:53:199	Bone	Bead		DAJ
0300	B.1:32:171	Basalt	Bowl Fragment		—
0301	C.4:35:7	Ceramic	Rattle		HAM68.0054
0302	B.1:47:185	Bronze	Fibula Spring		HAM68.0238
0303	C.1:6:126	Bone	Worked Bone		HAM68.0239
0304	C.3:7:49	Iron	Ring		HAM68.0240
0305	C.3:7?:49	Iron	Spike		HAM68.0241
0306	D.1:27:87	Iron	Dagger		DAJ
0307	C.1:6:194	Stone	Bowl Rim		HAM68.0242
0308	C.3:5:52	Iron	Pin		HAM68.0243
0309	B.1:52:187	Ceramic	Ostracon	Iron 2/Persian	DAJ
0310	B.1:44:177	Limestone	Mortar		—
0311	C.3:5:53	Bronze	Coin	Byzantine	HAM68.0244
0312	C.4:45:7	Ceramic	Lamp	Islamic	HAM68.0029
0313	C.4:7:43	Ceramic	Juglet	Mamluk	DAJ
0314	C.4:7:43	Ceramic	Jug	Mamluk	DAJ
0315	C.4:14:48	Ceramic	Bowl		DAJ
0316	C.4:7:35-45	Ceramic	Jug	Mamluk	HAM68.0030
0317	C.4:7:35-45	Ceramic	Jug	Mamluk	HAM68.0031
0318	C.4:7:35-45	Ceramic	Jug	Mamluk	HAM68.0032
0319	C.4:7:35-45	Ceramic	Jar	Mamluk	HAM68.0033
0320	C.4:7:7:38	Iron	Hemlet		DAJ
0321	C.4:7:85	Iron	Coin?		DAJ
0322	C.4:7:35-45	Ceramic	Jug	Islamic	HAM68.0034
0323	C.4:7:35-45	Stone	Door Socket		—
0324	A.4:19:84	Limestone	Architectural Fragment		DAJ
0325	C.4:7:35-45	Chert	Slingstone		HAM68.0055
0326	—	Glass	Bowl Fragments		HAM68.0246
0327a	—	Glass	Bangle Fragments		HAM68.0245
0328a	A.1:5:21	Bronze	Coin		HAM68.0289
0329a	C.4:7:25?	Bronze	Coin		HAM68.0291
0330a	D.1:20:63	Ceramic	Lamp	Byzantine	HAM68.0292
0331a	D.2:15:99	Ceramic	Lamp	Byzantine	HAM68.0293
0332a	D.2:10:52	Limestone	Vessel Fragment		HAM68.0294
0333a	D.3:13:53	Limestone	Vessel Fragment		HAM68.0295
0334a	D.3:14:75	Schist	Vessel Fragment		HAM68.0296
0335a	C.2:7:74	Ceramic	Bomb Fragment	Islamic	HAM68.0297

0336a	D.1:20:63 and 69	Ceramic	Jug		HAM68.0298
0327b	B.4:1:2	Iron	Nail		HAM71.0852
0328b	A.1:29:85	Bronze	Earring		HAM71.0859
0329b	B.4:1:3	Iron	Nail		HAM71.0853
0330b	B.4:1:3	Bronze?	Knife Guard		HAM71.0854
0331b	D.5:1:1	Lead	Musket Ball		HAM71.0855
0332b	A.2:17:51	Marble	Sculpture Fragment		HAM71.0841
0333b	C.1:Cleanup:302	Crystal	Ring Stone		DAJ
0334b	C.1:Cleanup:302	Bone	Spindle Fragment		HAM71.0857
0335b	C.4:47:105	Quartz	Bead		HAM71.0858
0336b	C.4:47:105	Glass	Bead		HAM71.0031
0337	E.1:4:4	Iron	Nail		HAM71.0032
0338	E.1:1:1	Glass	Bead		HAM71.0033
0339	B.2:1:4	Shell	Oyster		HAM71.0034
0340	B.2:1:4	Serpentine	Bead		HAM71.0036
0341	B.4:1:4	Stone	Fossil Shell		HAM71.0035
0342	C.4:18:121	Glass	Tessera		HAM71.0037
0343	B.4:1:4	Iron	Nail		HAM71.0038
0344	B.4:1:5	Iron	Ring		HAM71.0039
0345	B.4:1:5	Limestone	Architectural Fragment		HAM71.0040
0346	C.4:25:120	Bronze	Bangle		HAM71.0041
0347	B.4:1:4	Bone	Button		HAM71.0042
0348	C.4:18:121	UD	Glazed Material		HAM71.0043
0349	B.3:1:2	Glass	Bead		HAM71.0044
0350	C.4:5:123	Iron	UD		HAM71.0045
0351	A.2:Surface	Stone	Muller		—
0352	D.6:1:3	Ceramic	Roof Tile		—
0353	A.1:29:84	Limestone	Pestle		HAM71.0046
0354	A.5:1:12	Glass	Tessera		—
0355	B.2:1:6	Iron	Nail		HAM71.0047
0356	B.2:1:6	Iron	Cotter Pin		HAM71.0048
0357	B.2:5:7	Glass	Bead		HAM71.0738
0358	B.4:1:6	Lead	UD		HAM71.0049
0359	B.4:1:6	Iron	Nail		HAM71.0050
0360	B.4:1:8	Iron	Sickle?		HAM71.0051
0361	B.4:1:8	Iron	Nail		HAM71.0052
0362	B.4:1:6	Bronze	Pin		HAM71.0524
0363	B.4:1:7	Iron	Bullet		HAM71.0053
0364	C.1:24:320	Glass	Bead		HAM71.0739
0365	C.4:19:130	Iron	Arrowhead		HAM71.0054
0366	C.4:24:131	Bronze	Coin	Mamluk	DAJ
0367	D.1:24:105	Glass?	Bead		HAM71.0740
0368	C.4:23:127	Stone	Fossil Shell		HAM71.0055
0369	D.5:1:3	Basalt	Muller		—
0370	C.4:30:148	Bronze	Cosmetic Rod		HAM71.0160
0371	A.3:26:83	Iron	Nail		HAM71.0056
0372	B.4:1:5	Stone	Fossil Shell		HAM71.0057
0373	B.4:1:8	Stone	Fossil Shell		HAM71.0058
0374	A.5:1:12	Ceramic	Roof Tile		HAM71.0059
0375	B.4:1:9	Iron	Nail		HAM71.0060
0376	B.4:1:10	Iron	Cosmetic Rod		HAM71.0061
0377	B4:1:10	Iron	Ring Fragments		—
0378	B.4:1:11	Basalt	Spindle Whorl		HAM71.0062
0379	C.4:30:142	Serpentine	Bead/Pendant		HAM71.0063
0380	C.4:27:137	Iron	Nail		HAM71.0064
0381	C.4:30:148	Bronze	Coin		HAM71.0531
0382	D.1:40:	Quartz	Bead		HAM71.0161
0383	D.1:40:	Glass?	Bead		HAM71.0162

0384	D.1:40:	Glass?	Bead		HAM71.0163
0385	D.1:41:109	Shell	Oyster		HAM71.0065
0386	D.1:41:109	Shell	Shell		HAM71.0066
0387	D.6:5:12	Bronze	Coin	Nabataean	HAM71.0532
0388	C.1:24:322	Ceramic	Inscribed Vessel Handle		HAM71.0067
0389	A.2:Surface:	Bronze	Coin		HAM71.0533
0390	C.1:1:302	Ceramic	Bomb		HAM71.0068
0391	B.2:1:4	Bronze	Coin	L. Roman	DAJ
0392	D.6:5:12	Stone	Quern Fragment		HAM71.0525
0393	B.2:1:8	Limestone	Weight		HAM71.0851
0394	C.4:31:145	Iron	Lock		HAM71.0069
0395	C.4:19:140	Ceramic	Weight		HAM71.0070
0396	C.4:25:139	Limestone	Architectural Fragment		HAM71.0071
0397	A.2:18:57	Bronze	Coin	Byzantine	DAJ
0398	A.2:18:57	Bronze	Coin	Byzantine	HAM71.0534
0399	B.4:1:13	Iron	Nail		HAM71.0072
0400	C.1:20:342	Bone	Hairpin		HAM71.0073
0401	C.4:27:149B	Stone	Stone Fragment		—
0402	C.4:27:147	Chert	Slingstone		—
0403	C.4:25:157	Bronze	Ring		HAM71.0074
0404	C.4:25:157	Iron	Nail		HAM71.0075
0405	D.1:41:110	Bronze	Coin	Byzantine	HAM71.0535
0406	D.6:5:18	Iron	Nail		HAM71.0076
0407	D.6:15:23	Bronze	Coin	Byzantine	DAJ
0408	D.6:10:19	Faience	Bead		HAM71.0077
0409	D.6:15:20	Iron	Nail		HAM71.0421
0410	D.6:15:21	Iron	Nail		HAM71.0078
0411	A.4:27:124	Limestone	Vessel Fragment		HAM71.0079
0412	C.4:19:163	Ceramic	Disc		HAM71.0080
0413	A.5:1:4	Bronze	Coin		HAM71.0536
0414	A.5:1:4	Bronze	Coin	Ayyubid	HAM71.0537
0415	B.4:1:16	Bronze	Ring		HAM71.0081
0416	B.4:1:16	Glass	Gaming Piece		HAM71.0082
0417	B.4:1:16	Iron	Nail		HAM71.0083
0418	B.4:1:16	Iron	Cosmetic Rod		HAM71.0084
0419	C.1:11:350	Bone	Hairpin		HAM71.0085
0420	C.4:19:165	Chert	Slingstone		HAM71.0086
0421	C.4:22:173	Iron	Cosmetic Rod		HAM71.0087
0422	C.4:37:174	Iron	Nail		HAM71.0088
0423	C.4:37:174	Iron	Nail		HAM71.0089
0424	C.4:37:174	Iron	Nail		HAM71.0090
0425	C.4:37:174	Iron	Nail		HAM71.0091
0426	C.4:39:175	Bronze	Cosmetic Spatula		HAM71.0092
0427	C.4:23:176	Chert	Slingstone		HAM71.0093
0428	D.5:4:10	Glass	Bead		HAM71.0741
0429	D.6:15:25	Bronze	Coin	L. Roman	DAJ
0430	D.6:15:24	Alabaster	Spindle Whorl		HAM71.0094
0431	F.4:4:4	Bronze	Clip		HAM71.0095
0432	B.2:5:15	Stone	Vessel Fragment		—
0433	C.4:34:16	Limestone	Weight		HAM71.0096
0434	A.1:17:102	Bronze	Ring		HAM71.0097
0435	B.2:1:20	Marble	Sculpture Fragment		—
0436	B.4:5:20	Bronze	Coin	Mamluk	DAJ
0437	B.4:5:20	Glass	Bead		HAM71.0165
0438	B.4:5:20	Iron	Nail		HAM71.0098
0439	B.4:5:20	Bronze	Earring?		HAM71.0099
0440	C.4:37:178	Chert	Slingstone		HAM71.0100
0441	C.1:7:355	Glass	Bead		HAM71.0166

0442	C.4:39:179	Iron	Nail		HAM71.0101
0443	C.4:35:180	Ivory	Spindle		HAM71.0102
0444	C.4:37:182	Basalt	Slingstone		HAM71.0103
0445	C.4:37:182	Iron	Sickle		HAM71.0104
0446	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0538
0447	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0448	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0449	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0450	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0451	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0452	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0539
0453	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0540
0454	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0455	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0541
0456	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0457	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0458	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0459	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0460	C.4:37:185	Bronze	Coin	Ayyubid	DAJ
0461	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0542
0462	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0543
0463	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0464	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0544
0465	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0466	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0545
0467	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0468	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0546
0469	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0470	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0471	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0547
0472	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0473	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0474	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0548
0475	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0476	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0549
0477	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0550
0478	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0479	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0551
0480	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0481	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0552
0482	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0483	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0553
0484	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0554
0485	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0486	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0487	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0488	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0489	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0490	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0491	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0492	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0493	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0494	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0495	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0555
0496	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0556
0497	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0557
0498	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0558
0499	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0559

0500	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0560
0501	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0561
0502	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0562
0503	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0563
0504	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0564
0505	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0565
0506	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0566
0507	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0567
0508	C.4.37:185	Silver/Bronze	Coin	Mamluk	DAJ
0509	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
0510	D.6:5:22	Ceramic	Roof Tile		HAM71.0105
0511	D.6:5:25	Glass	Bead		HAM71.0742
0512	B.2:1:6	Bronze	Coin	Mamluk	HAM71.0568
0513	C.4:11:104	Bronze	Coin	Mamluk	DAJ
0514	C.4:23:127	Bronze	Coin	Umayyad	DAJ
0515	D.5:3:5	Bronze	Coin	Ayyubid	DAJ
0516	D.6:5:8	Bronze	Coin	Mamluk	HAM71.0788
0517	C.1:20:333	Ceramic	Inscribed Handle		HAM71.0106
0518	A.2:18:53	Bronze	Coin	Byzantine	DAJ
0519	C.4:25:157	Copper/Lead	Weight		HAM71.0107
0520	D.6:15:20	Basalt	Worked Stone		HAM71.0108
0521	C.4:19:167	Bronze	Kohl Stick		HAM71.0109
0522	C.4:19:167	Glass	Tessera		HAM71.0110
0523	C.4:13:171	Glass	Bead		HAM71.0799
0524	B.2:1:17	Bronze	Coin		HAM71.0800
0525	B.2:1:20	Soapstone	Whetstone Fragment		HAM71.0111
0526	C.5:1:1	Glass	Tessera		HAM71.0112
0527	A.1:39:104	Bronze	UD		HAM71.0113
0528	B.3:8:16	Iron	UD		HAM71.0114
0529	B.4:1:22	Bronze	Coin		—
0530	B.4:1:25	Limestone	Architectural Fragment		HAM71.0115
0531	B.4:11:26	Bronze	Bangle		HAM71.0116
0532	C.1:7:356	Glass	Bead		HAM71.0743
0533	C.4:42:228	Tin	Container?		HAM71.0117
0534	C.5:1:1	Faience	Ring Stone		HAM71.0118
0535	D.1:36:101	Bronze	Coin		HAM71.0801
0536	D.1:44:119	Iron	Cotter Pin		HAM71.0119
0537	D.5:6:14	Bronze	Coin	Byzantine	HAM71.0569
0538	C.4:35:177	Stone	Worked Stone		—
0539	C.4:37:185	Marble	Sculpture Fragment		—
0540	D.6:16:28	Bronze	Coin		HAM71.0802
0541	D.6:16:28	Ceramic	Weight		HAM71.0120
0542	D.6:20:30	Ceramic	Weight		HAM71.0121
0543	F.4:4:6	Bronze	Fibula		DAJ
0544	F.4:4:6	Bone	Needle Case		HAM71.0122
0545	F.5::	Bronze	Coin		HAM71.0803
0546	A.2:23:65	Bronze	Coin	Ayyubid	HAM71.0570
0547	A.5:4:8	Glass	Bangle Fragment		HAM71.0123
0548	B.1:17:	Bronze	Coin		HAM71.0571
0549	B.4:11:31	Iron	Nail		HAM71.0124
0550	C.4:44:193	Limestone	Architectural Fragment		—
0551	C.4:25:197	Chert	Slingstone		HAM71.0125
0552	C.4:25:197	Quartz	Weight		HAM71.0126
0553	C.4:44:200	Ivory	Spindle Fragment		HAM71.0127
0554	C.4:44:200	Sandstone	Architectural Fragment		HAM71.0128
0555	C.5:2:7	Glass?	Bead		HAM71.0744
0556	C.5:2:7	Bronze	Coin		—
0557	C.5:1:5	Carnelian	Bead		HAM71.0745

0558	C.5:1:5	Limestone	Architectural Fragment		HAM71.0129
0559	F.4:4:7	Silver	Earring		HAM71.0130
0560	C.5:1:6	Schist	Vessel Fragment	E. Roman	HAM71.0131
0561	D.1:44:123	Limestone	Slingstone		HAM71.0132
0562	D.5:6:16	Bronze	Coin	Mamluk	DAJ
0563	D.5:6:15	Iron	Nail		HAM71.0133
0564	D.5:6:15	Iron	Nail		HAM71.0134
0565	A.5:4:10	Ceramic	Vessel Fragment		—
0566	B.1:75:215	Limestone	Whetstone		HAM71.0135
0567	B.1:76:220	Chert	Slingstone		HAM71.0136
0568	B.4:6:36	Iron	Nail		HAM71.0137
0569	C.1:32:372	Glass	Bead		HAM71.0746
0570	C.1:33:373	Bronze	Coin	Byzantine	HAM71.0572
0571	C.4:35/44:200/201	Ceramic	Lamp		HAM71.0138
0572	C.4:35:201	Limestone	Vessel Fragment		—
0573	C.4:35:207	Iron	Nail		HAM71.0140
0574	C.4:35:207	Iron	Nail		HAM71.0139
0575	C.4:48:208	Iron	Nail		HAM71.0141
0576	C.4:41:209	Glass	Bead		HAM71.0747
0577	C.5:2:8	Iron	Sickle		HAM71.0142
0578	C.5:2:8	Bronze	UD		HAM71.0143
0579	C.5:1:9	Bronze	Bell		HAM71.0144
0580	C.5:1:9	Ceramic	Lamp		HAM71.0145
0581	C.5:1:9	Bronze	Coin	Mamluk	DAJ
0582	C.5:1:9	Iron	UD		HAM71.0146
0583	C.5:1:9	Iron	Arrowhead		HAM71.0147
0584	D.5:6:	Bronze	Coin		HAM71.0804
0585	D.6:17:48	Bone	Gaming Piece		HAM71.0148
0586	F.4:4:8	Iron	Tacks		—
0587	F.4:4:8	Iron	Bangle Fragments		HAM71.0149
0588	F.4:4:8	Gold	Earrings		DAJ
0589	F.4:4:8	Bronze	Earring		HAM71.0150
0590	F.4:4:8	Faience	Bead		HAM71.0748
0591	F.4:4:8	Faience	Bead		HAM71.0749
0592	F.4:5:9	Bronze	Bangle		HAM71.0164
0593	F.4:4:8	Bronze	Fibula Pin		HAM71.0656
0594	F.4:4:8	Ceramic	Lamp	E. Roman	DAJ
0595	F.6:16:2	Ceramic	Lamp	E. Roman	DAJ
0596	F.6:2:2	Glass	Cosmetic Applicator		DAJ
0597	F.6:2:3	Bronze?	Nail		HAM71.0151
0598	F.6:2:2	Ceramic	Cooking Pot	Roman	HAM71.0634
0599	A.5:4:12	Bronze	Bangle Fragment		HAM71.0152
0600	B.2:8:32	Iron	Nail		HAM71.0153
0601	B.3:3:23	Basalt	Vessel Fragment		HAM71.0845
0602	B.4:6:40	Iron	Nail		HAM71.0167
0603	C.5:3:11	Bronze	Coin	Mamluk	HAM71.0573
0604	C.5:3:11	Bronze	Bangle		HAM71.0155
0605	D.6:26:38	Glass	Bead		HAM71.0154
0606	D.6:26:38	Bronze	Coin	Umayyad	HAM71.0574
0607	F.6:2:2	Iron	Nail		HAM71.0156
0608	F.6:2:2	Iron	Bangle		HAM71.0157
0609	F.6:2:2	Lead	UD		HAM71.0158
0610	F.6:2:2	Ceramic	Jug		HAM71.0796
0611	F.6:2:2	Ceramic	Bowl Fragments		HAM71.0159
0612	F.6:2:2	Ceramic	Bowl		HAM71.0635
0613	F.6:2:2	Ceramic	Lamp		HAM71.0168
0614a	F.6:2:2	Glass	Bead		HAM71.0750
0614b	F.6:2:2	Ceramic	Lamp	E. Roman	HAM71.0636

0615	F.6:2:2	Serpentine	Spindle Whorl		DAJ
0616	F.6:2:2	Bronze	Coin	Byzantine	DAJ
0617	F.6:2:2	Carnelian	Bead		HAM71.0751
0618	F.6:2:2	Faience	Bead		HAM71.0752
0619	F.6:2:2	Glass	Bead		HAM71.0169
0620	F.6:2:2	Bone	Spindle Whorl		HAM71.0170
0621	F.6:2:2	Bone	Spindle Fragment		HAM71.0171
0622	F.6:2:2	Frit	Amulet		HAM71.0172
0623	F.6:6:4	Ivory	Spindle		DAJ
0624	F.6:6:4	Bronze	Kohl Stick		HAM71.0173
0625	F.6:6:4	Bone	Needle Fragment		HAM71.0174
0626	F.6:6:4	Bone	Needle Fragment		HAM71.0175
0627	F.6:6:4	Bone	Needle Fragment		HAM71.0176
0628	F.6:6:4	Bone	Needle Fragment		HAM71.0177
0629	F.6:6:4	Bone	Needle Fragment		HAM71.0178
0630	F.6:6:4	Bone	Needle Fragment		HAM71.0179
0631	F.6:6:4	Bone	Needle Fragment		HAM71.0180
0632	F.6:6:4	Bone	Needle Fragment		HAM71.0181
0633	F.6:4:6	Basalt	Mortar		HAM71.0182
0634	F.6:4:6	Basalt	Mortar		DAJ
0635	F.6:5:7	Bronze	Bangle Fragment		HAM71.0657
0636	F.6:7:5	Bronze	Coin	Roman	HAM71.0654
0637	F.6:7:5	Bronze	Coin	L. Roman	HAM71.0575
0638	F.6:8:9	Iron	Nail		HAM71.0183
0639	F.6:4:6	Gold	Earring		DAJ
0640	F.6:10:11	Bronze	Bangle		HAM71.0184
0641	F.6:11:15	Bronze	Bangle		HAM71.0185
0642	F.6:11:15	Bone	Spindle Fragment		HAM71.0186
0643	F.6:11:15	Bone	Spindle Fragment		HAM71.0187
0644	F.6:11:15	Bone	Spindle Fragment		HAM71.0188
0645	F.6:11:15	Bone	Needle Fragment		HAM71.0189
0646	D.6:26:38	Ceramic	Weight		HAM71.0190
0647	D.6:26:38	Ceramic	Weight		HAM71.0191
0648	D.6:26:38	Ceramic	Weight		HAM71.0192
0649	F.6:5:7	Carnelian	Intaglio		DAJ
0650	A.2:25:69	Plastic	Necklace		HAM71.0193
0651	B.1:78:227	Ceramic	Figurine	Iron 2/Persian	HAM71.0194
0652	B.1:84:229	Bronze	Cosmetic Spatula		HAM71.0195
0653	B.4:6:41	Iron	Nail		HAM71.0196
0654	B.4:6:41	Iron	Nail		HAM71.0197
0655	B.4:6:41	Bronze	Coin	Byzantine	HAM71.0576
0656	C.4:51:222	Iron	Ring		HAM71.0198
0657	C.4:19:214	Basalt	Muller		—
0658	C.4:15:224	Carnelian	Bead		HAM71.0753
0659	C.4:42:228	Iron	Nail		HAM71.0199
0660	C.4:42:228	Iron	Nail		HAM71.0200
0661	C.5:3:15	Bronze	Coin		HAM71.0577
0662	C.5:2:18	Bronze	Cosmetic Spoon		HAM71.0201
0663	D.5:6:15	Basalt	Rubbing Stone Fragment		—
0664	D.6:27:39	Ceramic	Weight		HAM71.0202
0665	D.6:27:39	Ceramic	Weight		HAM71.0203
0666	D.6:27:40	Iron	Sickle Blade Fragments		HAM71.0422
0667	F.6:5:12	Bronze	Bangle		HAM71.0658
0668	F.6:5:12	Bronze	Hairpin		HAM71.0523
0669	F.6:1:12	Alabaster	Cosmetic Dish		DAJ
0670	F.6:5:12	Gold	Earring Fragment		DAJ
0671	F.6:5:12	Ivory	Swan Head		DAJ
0672	F.6:4:13	Shell	Shell		HAM71.0262

0673	F.6:11:15	Glass	Cosmetic Applicator		DAJ
0674	F.6:11:15	Bronze	Cosmetic Spoon		DAJ
0675	F.6:3:16	Ivory/Shell	Cosmetic Body & lid		DAJ
0676	F.6:3:16	Ivory	Lid Attachments		DAJ
0677	F.6:3:16	Ivory	Tail		DAJ
0678	F.6:5:12	Silver	Earring		HAM71.0204
0679	F.6:5:12	Silver	Earring		HAM71.0205
0680	F.6:5:12	Glass	Bead		HAM71.0754
0681	F.6:4:13	Glass	Bead		—
0682	F.6:2:14	Bone	Ring		HAM71.0206
0683	F.6:2:14	Iron	Ring		HAM71.0207
0684	F.6:7:15	Glass	Cosmetic Applicator		HAM71.0208
0685	F.6:3:16	Bronze	Cosmetic Spoon		HAM71.0209
0686	F.6:3:16	Glass	Bead		—
0687	F.6:3:16	Glass	Gaming Piece		HAM71.0210
0688	F.6:3:16	Ivory	Gaming Piece		HAM71.0211
0689	F.6:14:18	Agate	Bead		HAM71.0755
0690	F.6:12:19	Silver	Bangle		HAM71.0212
0691	F.6:12:19	Glass?	Bead		HAM71.0213
0692	F.6:12:19	Bronze	Needle		HAM71.0525
0693	F.6:12:19	Carnelian	Bead		HAM71.0756
0694	F.6:12:19	Amethyst	Bead		HAM71.0757
0695	F.6:12:19	Glass	Bead		HAM71.0758
0696	F.6:12:19	Quartz	Bead		HAM71.0759
0697	F.6:12:19	Carnelian	Bead		HAM71.0760
0698	F.6:12:	Gold	Earring		DAJ
0699	F.6:12:	Gold	Earring		DAJ
0700	F.6:12:	Faience	Bead		HAM71.0761
0701	F.6:12:	Carnelian	Bead		HAM71.0762
0702	F.6:12:	Quartz	Bead		HAM71.0214
0703	F.6:12:	Glass	Bead		HAM71.0763
0704	F.6:13:20	Faience	Bead		HAM71.0764
0705	F.6:12:21	Bronze	Mirror		HAM71.0215
0706	F.6:12:21	Ceramic	Cooking Pot	Roman	HAM71.0637
0707	F.6:12:21	Glass	Bead		HAM71.0765
0708	F.6:12:21	Carnelian	Bead		HAM71.0766
0709	F.6:12:21	Carnelian	Bead		HAM71.0767
0710	F.6:12:21	Carnelian	Bead		HAM71.0768
0711	F.6:12:21	Carnelian	Bead		HAM71.0769
0712	F.6:12:21	Quartz	Bead		HAM71.0216
0713	F.6:12:21	Glass	Bead		HAM71.0770
0714	F.6:12:21	Silver	Bangle		HAM71.0217
0715	F.6:12:21	Bronze	Ring		HAM71.0218
0716	F.6:13:22	Faience	Bead		HAM71.0771
0717	F.6:13:22	Glass?	Bead		HAM71.0772
0718	F.6:13:23	Iron	Nail		HAM71.0219
0719	F.6:13:23	Faience	Scarab Bead		DAJ
0720	F.6:13:23	Faience	Scarab		HAM71.0773
0721	F.6:13:23	Glass	Vase		HAM71.0220
0722	F.6:13:23	Quartz	Bead		HAM71.0221
0723	F.6:13:23	Agate	Bead		HAM71.0774
0724	F.6:13:23	Glass	Bead		HAM71.0775
0725	F.6:13:23	Bone	Bangle		HAM71.0222
0726	F.6:5:12	Glass	Tear Bottle		DAJ
0727	F.6:5:12	Glass	Jar		HAM71.0776
0728	F.6:5:12	Glass	Vessel		DAJ
0729	F.5:2:14	Glass	Bottle		DAJ
0730	F.6:11:15	Glass	Bottle		HAM71.0777

0731	F.6:11:15	Glass	Bottle		DAJ
0732	F.6:3:16	Glass	Vessel		DAJ
0733	F.6:3:16	Glass	Jar		HAM71.0793
0734	F.6:3:16	Glass	Vessel		DAJ
0735	F.6:3:16	Glass	Bottle		HAM71.0659
0736a	F.6:12:21	Glass	Juglet		DAJ
0736b	F.6:3:16	Glass	Vessel		DAJ
0737	F.6:5:12	Glass	Jar		HAM71.0223
0738	F.6:5:12	Glass	Jar		HAM71.0224
0739	F.6:5:12	Glass	Vessel		HAM71.0660
0740	F.6:5:12	Glass	Juglet Neck		HAM71.0225
0741	F.6:5:12	Glass	Vessel		DAJ
0742	F.6:5:12	Glass	Bottle		DAJ
0743	F.6:5:12	Glass	Vessel		DAJ
0744	F.6:5:12	Glass	Bottle		HAM71.0794
0745	F.4:5:12	Bronze	Tube		HAM71.0226
0746	F.4:5:12	Iron	Nail		HAM71.0227
0747	F.4:5:12	Iron	Ring		HAM71.0228
0748	F.4:5:12	Glass	Bangle		DAJ
0749	F.4:5:12	Bronze	Necklace		HAM71.0229
0750	F.4:4:8	Gold	Earring		DAJ
0751	F.4:6:16?	Bronze	Ring		HAM71.0230
0752	F.4:6:15	Bronze	Incense Shovel		DAJ
0753	F.4:6:15	Gold	Earring		DAJ
0754	F.6:13:23	Bone	Bangle		HAM71.0231
0755	F.4:6:15	Bronze	Cosmetic Rod		HAM71.0232
0756	F.4:6:15	Iron	Key		HAM71.0233
0757	F.4:6:16	Carnelian	Bead		HAM71.0778
0758	F.4:6:16	Bronze	Bead		HAM71.0234
0759	F.4:7:20B	Glass	Bangle		HAM71.0661
0760	F.4:7:20B	Glass	Bangle		HAM71.0787
0761	F.4:7:20B	Glass	Bangle		DAJ
0762	F.4:7:20	Bronze	Cosmetic Rod		HAM71.0235
0763	A.1:60:128	Glass	Lamp Base	Byzantine	HAM71.0236
0764	A.1:55:129	Stone	Tesserae		—
0765	A.5:4:13	Basalt	Bowl Fragment		—
0766	A.5:4:14	Basalt	Quern		HAM71.0846
0767	B.1:91:246	Chert	Slingstone		HAM71.0237
0768	B.1:91:246	Ivory	Needle/Bodkin		HAM71.0238
0769	B.1:84:229	Basalt	Stone Fragment		—
0770	B.2:19:50	Bronze	Garment Pin		HAM71.0239
0771	B.3:12:29	Bronze	Ring		HAM71.0240
0772	B.3:18:35	Basalt	Spindle Whorl		HAM71.0241
0773	B.4:7:29	Ceramic	Strainer Juglet	Islamic	DAJ
0774	B.4:6:42	Soapstone	Whetstone		HAM71.0242
0775	B.4:6:44	Ceramic	Lamp Fragment	Islamic	HAM71.0243
0776	B.4:6:44	Plaster	Decorated Plaster		HAM71.0244
0777	B.4:14:45	Stone	Fossil		HAM71.0245
0778	B.4:15:46	Limestone	UD		HAM71.0246
0779	B.4:15:47	Bronze	Ring		HAM71.0424
0780	B.4:16:48	Bronze	Tack?		HAM71.0423
0781	B.4:16:49	Iron	Ring		HAM71.0247
0782	C.4:15:230	Iron	Nail		HAM71.0248
0783	C.4:51:237	Ivory	Spindle Whorl Fragment		HAM71.0249
0784	C.4:53:241	Steatite	Bead		HAM71.0779
0785	C.5:3:14	Schist	Vessel Fragment		HAM71.0250
0786	C.5:3:21	Iron	Sickle		HAM71.0251
0787	C.5:3:23	Bronze	Kohl Stick		HAM71.0252

0788	C.5:2:24	Glass	Bead		HAM71.0780
0789	C.5:2:24	Bronze	Kohl Stick		HAM71.0253
0790	C.5:2:22	Bronze	Bell		HAM71.0662
0791	D.5:6:	Alabaster	Vessel Fragment		HAM71.0254
0792	D.5:7:21	Limestone	Architectural Fragment		—
0793	D.5:8:26	Iron	Nail		HAM71.0255
0794	D.5:8:26	Iron	Nail		HAM71.0256
0795	D.5:8:26	Basalt	Stone Fragment		HAM71.0257
0796	D.6:27:43	Ceramic	Weight		HAM71.0258
0797	D.6:27:43	Iron	Nail		HAM71.0856
0798	D.6:31:45	Iron	Nail		HAM71.0259
0799	D.6:15:47	Basalt	Pestle		HAM71.0260
0800	D.6:34:51	Faience	Bead		HAM71.0781
0801	D.6:34:51	Bronze	Ring		HAM71.0669
0802	A.1:58:132	Coral?	Bead		HAM71.0261
0803	B.1:90:243	Ceramic	Ostracon	Iron 2/Persian	DAJ
0804	B.1:91:248	Limestone	Rubbing Stone		HAM71.0263
0805	B.1:91:249	Lead	Weight		HAM71.0264
0806	B.1:91:249	Alabaster	Vessel		HAM71.0265
0807	B.2:17:52	Bone	Pendant		HAM71.0266
0808	B.4:16:52	Iron	Hook		HAM71.0267
0809	B.4:16:52	Bronze	Chain Link		HAM71.0268
0810	C.1:8:415	Glass	Bottle		DAJ
0811	C.5:3:27	Iron	Hook		HAM71.0269
0812	C.5:3:29	Shell	Coral		HAM71.0270
0813	C.5:3:29	Limestone	Weight		HAM71.0271
0814	B.1:92:251	Stone	Vessel Fragment		Mamluk
0815	B.1:92:251	Chert	Slingstone		HAM71.0272
0816	B.2:19:54	Ceramic	Stamped Handle	Hellenistic	—
0817	B.4:15:47	Ceramic	Figurine, Zoomorphic	Iron 2	HAM71.0273
0818	A.5:17:26	Bronze	Bangle Fragment		HAM71.0274
0819	A.5:17:26	Limestone	Tube		HAM71.0275
0820	B.1:94:256	Shell	Clam Shell Fragment		HAM71.0276
0821	B.3:25:47	Limestone	Architectural Fragment		HAM71.0277
0822	B.3:27:48	Chert	Slingstone		HAM71.0278
0823	C.4:55:260	Ceramic	Decorated Fragment	Byzantine	HAM71.0279
0824	C.4:55:260	Marble	Architectural Fragment		—
0825	C.4:53:268	Ceramic	Jar Fragments		HAM71.0638
0826	C.4:54:275	Bronze	Needle		HAM71.0528
0827	C.4:54:275	Ceramic	Lamp	Byzantine	HAM71.0280
0828	C.4:53:279	Coral?	Bead		HAM71.0281
0829	C.4:57:283	Iron	Nail		HAM71.0282
0830	C.4:57:283	Iron	Nail		HAM71.0283
0831	C.4:57:283	Iron	Nail		HAM71.0284
0832	C.4:53:278	Bronze	Cross		HAM71.0652
0833	C.4:53:282	Glass	Bead		HAM71.0285
0834	C.4:13:291	Iron	Key Fragment		HAM71.0286
0835	C.5:3:29	Ceramic	Vessel Base	Byzantine	HAM71.0287
0836	C.5:3:32	Iron	Cosmetic Rod		HAM71.0288
0837	C.5:3:32	Iron	Cosmetic Rod		HAM71.0289
0838	C.5:3:32	Iron	Nail		HAM71.0290
0839	D.1:33:130	Iron	Nail		HAM71.0291
0840	D.5:5c:35	Flint	Knife		HAM71.0292
0841	D.5:5D:36	Bronze	Ring		HAM71.0293
0842	D.5:5D:36	Iron	Hook		HAM71.0294
0843	D.5:5E:37	Iron	Nail		HAM71.0295
0844	D.5:5A:38	Iron	Ring		HAM71.0296
0845	D.5:5A:38	Iron	Ring		HAM71.0297

0846	D.5:5F:40	Ceramic	Weight		HAM71.0298
0847	D.6:23:52	Iron	Nail		HAM71.0299
0848	F.1:2:	Glass	Bead		HAM71.0791
0849	A.1:58:132	Bronze	Coin	Byzantine	DAJ
0850	A.1:58:133	Bronze	Coin	Byzantine	HAM71.0578
0851	A.1:58:133	Bronze	Coin	Byzantine	HAM71.0579
0852	A.2:28:81	Glass	Bead		HAM71.0782
0853	A.2:28:81	Glass	Bead		HAM71.0783
0854	B.2:1:1	Bronze	Coin	Byzantine	DAJ
0855	B.3:13:30	Bronze	Coin	Byzantine	DAJ
0856	B.4:1:2	Bronze	Coin	Byzantine	HAM71.0580
0857	B.4:4:58	Ceramic	Roof Tile		HAM71.0847
0858	B.4:31:68	Iron	Nail		HAM71.0300
0859	C.1:6:434	Glass	Bead		HAM71.0784
0860	C.4:53:278	Glass + Metal	Beads (53)		HAM71.0653
0861	C.4:53:279	Limestone	Spindle Whorl		HAM71.0301
0862	D.5:5D:41	Bronze	Bangle		HAM71.0302
0863	D.5:5F:41	Iron	Nail		HAM71.0303
0864	A.5:34:33	Quartz	Bead		HAM71.0304
0865	B.4:30:69	Iron	Nail		HAM71.0305
0866	C.4:E Balk:	Iron	Hammer		HAM71.0306
0867	C.5:3:35	Glass	Bead		HAM71.0785
0868	C.5:3:35	Iron	Ring		HAM71.0307
0869	C.5:3:36	Iron	Nail		HAM71.0308
0870	F.10:8:11	Alabaster	Vessel Fragment		HAM71.0842
0871	F.10:7:	Iron	Ring		HAM71.0309
0872	F.10:7:	Bronze	Buckle		HAM71.0663
0873	F.10:7:	Iron	Bangle		HAM71.0310
0874	F.9::2	Iron	Ring		HAM71.0311
0875	B.2:27:67	Bronze	Ring		HAM71.0312
0876	A.1:58:159	Iron	UD		HAM71.0313
0877	B.1:97:274	Soapstone	Whetstone		HAM71.0425
0878	B.4:18:	Basalt	Architectural Fragment		HAM71.0848
0879	B.4:38:75	Iron	Nail		HAM71.0818
0880	C.1:45:404	Limestone	Vessel Fragment		HAM71.0314
0881	C.1:6:449	Basalt	Worked Stone		HAM71.0315
0882	C.1:38:459	Ceramic	Spindle Whorl		HAM71.0316
0883	C.1:51:472	Iron	Hook		HAM71.0317
0884	C.4:8:226	Bronze	Cosmetic Spoon		HAM71.0318
0885	C.4:13:294	Ceramic	Figurine	E. Roman	HAM71.0319
0886	C.4:59:315	Ceramic	Ostracon	Islamic	DAJ
0887	C.4:67:328	Iron	Nail		HAM71.0320
0888	C.5:4:40	Bronze	Cross		DAJ
0889	C.5:4:40	Iron	Nail		HAM71.0321
0890	C.5:4:40	Bronze	Buckle		HAM71.0322
0891	C.5:4:42	Bronze	Ring		HAM71.0323
0892	C.5:4:42	Bronze	Cosmetic Rod		HAM71.0324
0893	D.1:33:142	Stone	Fossil Shell		HAM71.0325
0894	D.1:50:143	Clay	Roof Tile		HAM71.0849
0895	D.1:41:144	Iron	Nail		HAM71.0326
0896	D.5:5D:44	Limestone	Disc		HAM71.0327
0897	D.5:5E:46	Iron	Nail		HAM71.0328
0898	D.5:5E:46	Iron	Nail		HAM71.0329
0899	D.5:5E:46	Iron	Nail		HAM71.0330
0900	D.5:5E:46	Pumice	Rubbing Stone		HAM71.0331
0901	D.5:5E:49	Iron	Hook		HAM71.0332
0902	D.5:5F:50	Iron	Ring		HAM71.0819
0903	D.5:5F:50	Bronze	Disc		HAM71.0333

0904	D.5:5F:50	Carnelian	Bead		HAM71.0334
0905	D.5:5F:50	Iron	Stirrup		HAM71.0335
0906	D.5:5F:50	Iron	Grappling Anchor		HAM71.0336
0907	D.5:5F:51	Iron	Weight		HAM71.0337
0908	D.5:15:52	Quartz	Bead		HAM71.0338
0909	D.1:48:153	Bronze	Nail		HAM71.0339
0910	D.1:48:153	Bronze	Cosmetic Spatula		HAM71.0340
0911	D.5:5E:37	Bronze	Coin	Mamluk	HAM71.0581
0912	D.5:5F:40	Bronze	Coin	Mamluk	HAM71.0582
0913	D.5:5A:44	Bronze	Coin	Mamluk	HAM71.0583
0914	D.6:37:70	Bronze	Coin	Byzantine	DAJ
0915	D.6:33A:71	Iron	Nail		HAM71.0341
0916	D.6:33A:71	Iron	Nail		HAM71.0342
0917	D.6:33A:71	Iron	Nail		HAM71.0343
0918	D.6:33A:71	Iron	UD		HAM71.0344
0919	D.6:33B:74	Ceramic	Weight		HAM71.0345
0920	D.6:33B:74	Ceramic	Weight		HAM71.0346
0921	D.6:33B:74	Ceramic	Weight		HAM71.0347
0922	D.6:33B:74	Faience	Bead		HAM71.0348
0923	D.6:33B:74	Faience?	Bead		HAM71.0349
0924	D.6:33B:74	Faience?	Bead		HAM71.0350
0925	D.6:33B:74	Iron	Ring		HAM71.0351
0926	D.6:33B:74	Iron	Hairpin		HAM71.0352
0927	D.6:33B:74	Iron	Arrowhead		HAM71.0353
0928	D.6:33D:76	Ceramic?	Ring		HAM71.0354
0929	D.6:33D:76	Ivory	Ring		HAM71.0355
0930	D.6:33C:77	Bone	Stave Button		HAM71.0356
0931	D.6:33C:77	Iron	Knife Fragments		HAM71.0357
0932	D.6:33C:77	Iron	Arrowhead		HAM71.0358
0933	D.6:33C:77	Bronze	Inscribed Ring	Islamic	HAM71.0359
0934	D.6:33C:77	Bronze	Bangle		HAM71.0360
0935	D.5:5E:46	Bronze	Coin	Mamluk	DAJ
0936	D.5:5E:46	Bronze	Coin	Mamluk	HAM71.0584
0937	D.5:5e:46	Bronze	Coin	Mamluk	DAJ
0938	D.5:5E:46	Bronze	Coin		HAM71.0585
0939	D.5:5E:46	Bronze	Coin	Mamluk	HAM71.0586
0940	D.5:5E:46	Bronze	Coin	Mamluk	HAM71.0587
0941	D.5:5E:46	Bronze	Coin	Mamluk	HAM71.0588
0942	D.5:5E:46	Bronze	Coin	Ayyubid	DAJ
0943	D.5:5E:46	Bronze	Coin	Mamluk	DAJ
0944	D.6:33C:77	Bronze	Coin	Mamluk	HAM71.0589
0945	D.6:33C:77	Bronze	Coin	Umayyad	DAJ
0946	D.6:33C:77	Bronze	Coin		HAM71.0590
0947	D.6:33C:77	Bronze	Coin	Umayyad	DAJ
0948	D.6:33C:77	Bronze	Coin	Mamluk	HAM71.0591
0949	D.6:33C:77	Bronze	Coin	Mamluk	HAM71.0592
0950	D.6:33C:77	Bronze	Coin	Mamluk	DAJ
0951	D.6:33C:77	Bronze	Coin	Mamluk	HAM71.0593
0952	D.6:33C:77	Silver	Coin	Mamluk	HAM71.0594
0953	D.6:33C:77	Bronze	Coin	Mamluk	DAJ
0954	F.5:2:1	Ceramic	Lamp	L. Roman	HAM71.0639
0955	F.5:2:1	Ceramic	Jar	L. Roman	DAJ
0956	F.5:2:1	Ceramic	Jar	L. Roman	HAM71.0640
0957	F.5:2:1	Ceramic	Lamp	L. Roman	DAJ
0958	F.1:1C:11	Bronze	Ring		HAM71.0361
0959	F.8:6:9	Basalt	Spindle Whorl		HAM71.0362
0960	F.8:6:9	Bronze	Bangle		HAM71.0363
0961	F.8:8:10	Glass	Bead		HAM71.0364

0962	F.8:8:10	Faience	Bead		HAM71.0365
0963	F.8:8:10	Bronze	Ring		HAM71.0366
0964	B.2:31:69	Stone	Tesserae		—
0965	B.4:33:85	Iron	Cosmetic Rod		HAM71.0367
0966	B.4:41:88	Glass	Bead		HAM71.0368
0967	C.1:6:455	Ceramic	Incised Rim		HAM71.0369
0968	C.1::	Marble	Sculpture Fragment		HAM71.0370
0969	C.5:4:4	Ceramic	Sherd		HAM71.0371
0970	C.5:5:48	Limestone	Weight		HAM71.0372
0971	A.1:58:152	Bronze	Ring		HAM71.0373
0972	A.2:30:94	Ceramic	Lamp	L. Roman	HAM71.0374
0973	A.6:18:18	Ceramic	Lid Handle		HAM71.0375
0974	A.6:18:18	Iron	Nail		HAM71.0376
0975ab	B.1:Balk Trim:	Glass	Beads		HAM71.0377
0976	C.1:56:493	Bronze	Cosmetic Spatula		HAM71.0378
0977	C.1:54:498	Ceramic	Bowl Fragment		—
0978	C.1:38:501	Onyx	Spindle Whorl		HAM71.0379
0979	C.4:41:354	Stone	Muller Fragment		HAM71.0850
0980	C.5:5:49	Chert	Slingstone		HAM71.0380
0981	C.5:5:49	Basalt	Muller Fragment		—
0982	D.6:33E:89	Iron	Fish Hook		HAM71.0820
0983	D.6:33E:89	Ceramic	Weight		HAM71.0381
0984	D.6:33E:89	Ceramic	Weight		HAM71.0382
0985	D.6:33E:89	Ceramic	Weight		HAM71.0383
0986	D.6:33E:89	Bronze	Ring		HAM71.0426
0987	D.6:33E:89	Glass	Bead		HAM71.0384
0988	D.6:33E:89	Faience?	Bead		HAM71.0385
0989	D.6:33E:90	Ceramic	Weight		HAM71.0386
0990	D.6:33E:90	Ceramic	Weight		HAM71.0387
0991	D.6:33E:90	Ceramic	Weight		HAM71.0388
0992	D.6:33E:90	Iron	Arrowhead		HAM71.0389
0993	D.6:33E:90	Iron	Knife		HAM71.0821
0994	D.6:33F:92	Glass	Bead		HAM71.0390
0995	D.6:33F:93	Iron	UD		HAM71.0641
0996	F.1:2:16	Bone	Hairpin		HAM71.0391
0997	F.1:2:16	Silver	Ring		DAJ
0998	F.1:2:16	UD	Button		HAM71.0392
0999	F.1:2:13	Iron	Bangle		HAM71.0393
1000	F.1:2A:16	Glass	Bangle		DAJ
1001	F.10:8:11	Bronze	Cosmetic Spatula		DAJ
1002	F.10:8:11	Gold	Earring		DAJ
1003	F.10:8:11	Glass	Bead		HAM71.0394
1004	F.10:8:11	Iron	Buckle		HAM71.0395
1005	F.10:8:11	Iron	Bangle		HAM71.0396
1006	F.10:8:11	Iron	Bangle		HAM71.0397
1007	F.10:8:2	Ceramic	Juglet		HAM71.0642
1008	C.4:37:188	Ceramic	Lamp	Islamic	HAM71.0398
1009	C.4:37:185	Silver/Bronze	Coin	Mamluk	HAM71.0595
1010	C.4:37:185	Silver/Bronze	Coin	Mamluk	DAJ
1011	C.1:Cleanup:102	Bronze	Coin	Ayyubid	DAJ
1012	C.1:Cleanup:102	Bronze	Coin		HAM71.0596
1013	C.1:Cleanup:102	Bronze	Coin		HAM71.0597
1014	C.1:41:408	Bronze	Coin	Nabataean	HAM71.0598
1015	C.1:45:426	Bronze	Coin	Maccabean	HAM71.0599
1016	C.3:Surface:101	Bronze	Coin		HAM71.0600
1017	C.4:Surface:102	Bronze	Coin		HAM71.0601
1018	C.4:47:105	Bronze	Coin	Nabataean	HAM71.0602
1019	C.4:41:282	Bronze	Coin	Byzantine	HAM71.0603

1020	C.5:3:20	Bronze	Coin	Ayyubid	DAJ
1021	C.5:3:21	Bronze	Coin	Mamluk	DAJ
1022	D.2:E Balk:	Bronze	Coin		HAM71.0604
1023	D.5:5D:36	Bronze	Coin	Mamluk	DAJ
1024	D.5:5F:41	Bronze	Coin	Mamluk	DAJ
1025	D.5:5F:41	Bronze	Coin		HAM71.0605
1026	D.5:5F:41	Bronze	Coin		HAM71.0606
1027	D.5:5F:41	Bronze	Coin		HAM71.0607
1028	D.5:5F:41	Bronze	Coin		HAM71.0608
1029	D.5:5F:41	Bronze	Coin		HAM71.0609
1030	D.5:5F:41	Bronze	Coin	Mamluk	HAM71.0610
1031	D.6:31:45	Bronze	Coin	Ayyubid	HAM71.0611
1032	A.5:45:55	Shell	Pendant		HAM71.0399
1033	A.5:44:54	Ceramic	Handle		—
1034	A.5:4:53	Bronze?	Earring		HAM71.0400
1035	B.2:34:107	Bronze	Plate Fragments		HAM71.0401
1036	C.5:5:54	Bronze	Disc		HAM71.0402
1037	D.6:33G:101	Iron	Sickle		HAM71.0403
1038	D.6:33G:101	Iron	Nail		HAM71.0404
1039	D.6:33H:104	Ceramic	Spindle Whorl		HAM71.0405
1040	F.1:2B:13	Ceramic	Juglet		HAM71.0643
1041	F.1:2A:17	Bone	Hairpin Fragment		HAM71.0406
1042	D.6:33a:71	Ceramic	Juglet		HAM71.0644
1043	A.5:49:60	Lead	Weight		DAJ
1044	B.1:77:226	Ceramic	Lamp Fragment	Iron Age	HAM71.0407
1045	B.2:42:84	Bronze	Fibula Spring		HAM71.0427
1046	B.4:33:84	Ceramic	Lamp Fragment		HAM71.0408
1047	B.4:47:95	Glass	Bead		HAM71.0409
1048	C.5:5:56	Basalt	Spindle Whorl		HAM71.0410
1049	C.6:1:4	Basalt	Bowl Fragment		—
1050	D.5:24:64	Copper	Hook		HAM71.0411
1051	D.6:33D:76	Ceramic	Bowl Fragment		HAM71.0412
1052	D.6:33D:76	Ceramic	Bowl Fragment		HAM71.0413
1053	D.6:33H:110	Iron	Arrowhead		HAM71.0414
1054	D.6:33H:110	Iron	Knife		HAM71.0415
1055	D.6:33H:110	Bronze	Button		HAM71.0416
1056	D.6:33I:111	Iron	Nail		HAM71.0417
1057	F.1:2B:13	Ceramic	UD		HAM71.0418
1058	F.1:2:17	Glass	Gaming Piece		HAM71.0419
1059	F.1:2:17	Iron	Ring		HAM71.0420
1060	F.1:2:19	Bone	Hairpin		HAM71.0428
1061	F.1:2:19	Bronze	Bangle Clasp		HAM71.0429
1062	F.1:4:20	Wood/Iron	Wood UD + 2 Nails		HAM71.0430
1063	F.10:2:13	Glass	Vessel		HAM71.0795
1064	F.10:2:13	Glass	Bottle		DAJ
1065	F.10:2Upper:16	Bronze	Bangle		HAM71.0431
1066	F.10:2Upper:16	Ceramic	Lamp		HAM71.0432
1067	F.10:6:15	Bone	Hairpin		HAM71.0822
1068	F.10:6:15	Bronze	Bell & Clapper		HAM71.0664
1069	F.10:6:15	Bronze	Bangle		HAM71.0433
1070	F.10:6:15	Bronze	Necklace		HAM71.0434
1071	F.10:6:15	Bronze	Buckle		HAM71.0435
1072	F.10:6:15	Iron/Bronze	Bangle Fragments		HAM71.0436
1073	F.10:6:15	Basalt	Spindle Whorl		HAM71.0437
1074	F.10:4:17	Bronze	Bangle		HAM71.0438
1075	F.10:2Upper:13	Ceramic	Jug		HAM71.0645
1076	A.5:23:27	Bronze	Coin	Byzantine	DAJ
1077	D.6:33G:100	Bronze	Coin	Ayyubid	DAJ

1078	D.6:33G:100	Bronze	Coin	Ayyubid	DAJ
1079	D.6:33G:100	Bronze	Coin	Byzantine	HAM71.0612
1080	D.6:33G:100	Bronze	Coin	Ayyubid	DAJ
1081	D.6:33D:76	Bronze	Coin	Ayyubid	DAJ
1082	D.6:33D:76	Bronze	Coin	Mamluk	HAM71.0613
1083	D.6:33D:76	Bronze	Coin	Mamluk	HAM71.0614
1084	D.5:33H:110	Bronze	Coin	Mamluk	DAJ
1085	D.6:33H:110	Bronze	Coin	Mamluk	HAM71.0615
1086	D.6:33F:95	Bronze	Coin	Ayyubid	DAJ
1087	D.6:33F:95	Bronze	Coin	Ayyubid	HAM71.0616
1088	D.6:33E:89	Bronze	Coin		HAM71.0617
1089	D.6:33E:89	Bronze	Coin	Mamluk	HAM71.0618
1090	D.6:33E:89	Bronze	Coin	Maccabean	HAM71.0619
1091	D.6:33E:89	Bronze	Coin	L. Roman	HAM71.0620
1092	D.6:33F:92	Bronze	Coin		HAM71.0621
1093	D.6:33F:92	Bronze	Coin	Mamluk	HAM71.0622
1094	D.6:33G:101	Bronze	Coin	Ayubid	DAJ
1095	D.6:33H:104	Bronze	Coin	Ayyubid	HAM71.0623
1096	D.6:33H:104	Bronze	Coin	Ayyubid	DAJ
1097	D.6:36:68	Bronze	Coin	Ayyubid	HAM71.0624
1098	D.5:5F:50	Bronze	Coin	Mamluk	HAM71.0625
1099	D.5:5F:50	Bronze	Coin	Mamluk	HAM71.0626
1100	D.5:5F:50	Bronze	Coin	E. Roman	DAJ
1101	D.5:5F:51	Bronze	Coin	Mamluk	HAM71.0789
1102	B.4:43:90	Bronze	Coin	Nabataean	HAM71.0790
1103	C.1:35:489	Bronze	Coin	L. Roman	HAM71.0627
1104	A.6:30:27	Ceramic	Weight		HAM71.0439
1105	B.4:48:96	Limestone	Vessel Fragment		HAM71.0440
1106	C.1:25:518	Glass	Spindle Whorl		HAM71.0665
1107	—	Ceramic	Juglet		DAJ
1108	—	Ceramic	Jug		DAJ
1109	F.1:2:16	Ceramic	Bowl Fragment		HAM71.0526
1110	—	Ceramic	Lamp		DAJ
1111	—	Ceramic	Lamp		DAJ
1112	A.5:64:80	Ceramic	Juglet		—
1113	D.6:33I:117	Ceramic	Juglet		HAM71.0797
1114	—	Ceramic	Jug		DAJ
1115	A.1:57:148	Bronze	Coin	Byzantine	HAM71.0628
1116	A.5:9:65	Limestone	Architectural Fragment		HAM71.0441
1117	B.2:38:106	Bronze	Brace		HAM71.0442
1118	B.3:29:61	Bronze	Coin	E. Roman	DAJ
1119	B.3:39:77	Bone	Weaving-pattern Spatula		HAM71.0443
1120	B.3:41:79	Ceramic	Loom Weight		HAM71.0444
1121	B.3:41:79	Ceramic	Loom Weight		HAM71.0445
1122	B.3:41:79	Ceramic	Loom Weight		HAM71.0446
1123	B.3:41:79	Bronze	Nail		HAM71.0447
1124	B.4:49:99	Chert	Slingstone		HAM71.0448
1125	B.4:50:104	Faience	Bead		HAM71.0449
1126	B.4:59:114	Limestone	Weight		HAM71.0450
1127	B.4:59:114	Bone	Spindle Whorl		DAJ
1128	B.4:59:114	Bone	Comb Fragment		DAJ
1129	B.4:59:114	Basalt	Rubbing Stone		HAM71.0451
1130	B.4:59:114	Basalt	Quern Fragment		HAM71.0452
1131	B.4:59:114	Stone	Grinder?		HAM71.0453
1132	C.1:25:518	Bronze	UD		HAM71.0454
1133	C.4:71:381	Soapstone	Whetstone		HAM71.0455
1134	C.4:41:395	Shell	Button		HAM71.0456
1135	C.5:5:58	Ceramic	Decorated Sherd		HAM71.0457

1136	C.6:1:3	Ceramic	Castanet		HAM71.0458
1137	C.6:5:6	Basalt	Pestle		HAM71.0459
1138	C.6:5:6	Iron	Sickle		HAM71.0460
1139	D.5:5E:37	Bronze	Coin	Mamluk	HAM71.0629
1140	D.6:33E:90	Bronze	Coin	Mamluk	HAM71.0630
1141	D.6:33E:90	Bronze	Coin	Ayyubid	DAJ
1142	D.6:33H:104	Bronze	Coin	Ottoman?	HAM71.0631
1143	D.6:33I:116	Iron	Chain Link		HAM71.0461
1144	D.6:33I:117	Carnelian	Bead		HAM71.0462
1145	D.6:44:118	Chert	Slingstone		HAM71.0463
1146	D.6:33F:120	Faience	Bead		HAM71.0464
1147	D.6:45:121	Lead	Figurine		HAM71.0465
1148	D.6:33G:124	Bronze	Coin	Ayyubid	DAJ
1149	D.6:33G:124	Bronze	Tool-handle Sheath		HAM71.0466
1150	D.6:33I:128A	Bronze	Coin	Ayyubid	DAJ
1151	D.6:33I:128A	Basalt	Spindle Whorl		HAM71.0467
1152	D.6:33I:128A	Iron	Arrowhead		HAM71.0468
1153	D.6:33C:137	Iron	Sickle		HAM71.0469
1154	D.6:33C:137	Iron	Arrowhead		HAM71.0470
1155	D.6:33D:138	Iron	Arrowhead		HAM71.0471
1156	D.6:33D:138	Ceramic	Weight		HAM71.0472
1157	F.1:2:22	Glass	Bangle		DAJ
1158	F.1:2:22	Gold	Earring		HAM71.0473
1159	F.1:2:22	Bronze	Bangle		HAM71.0474
1160	F.1:2B:22	Bone	Hairpin		HAM71.0428
1161	F.1:2:22	Bone	Hairpin		HAM71.0475
1162ab	F.1:2:22	Glass et al.	Beads		HAM71.0476
1163	F.1:2:23	Iron	Bangle		HAM71.0477
1164	F.1:2:25	Bronze	Bangle		HAM71.0478
1165	F.1:2:25	Glass	Button		DAJ
1166	F.1:2:25	Glass	Button		HAM71.0479
1167ab	F.1:2:25	Glass et al.	Beads		HAM71.0480
1168	F.5:2:2	Bronze	Clip		HAM71.0481
1169	F.5:2:2	Bronze	Lock Fragment		HAM71.0482
1170	F.10:6:16	Silver/Gold	Earring		HAM71.0483
1171	F.10:5:	Bronze	Bangle		HAM71.0484
1172a-g	F.10:6:15	Glass	Beads		DAJ
1173	F.10:6:15	Bronze	Ring		HAM71.0485
1174	F.10:4:17	Iron	Bangle		HAM71.0486
1175a-jj	F.10:2:13	Glass	Beads		DAJ
1176 ab	F.10:5:	Glass	Beads		HAM71.0487
1177	F.10:5:	Glass	Bangle		DAJ
1178	F.10:5:	Glass	Bangle		HAM71.0666
1179	F.10:4:17	Bronze	Wire Fragments		HAM71.0488
1180a-d	F.10:4:17	Glass et al.	Beads		DAJ
1181	F.10:4:17	Bronze	Ring		HAM71.0489
1182a-g	F.10:4:17	Glass et al.	Beads		DAJ
1183ab	F.10:5:	Glass	Beads		HAM71.0490
1184	B.2:57:110	Ceramic	Ostracon		HAM71.0491
1185	B.4:59:114	Bronze	Brooch		HAM71.0492
1186	B.4:59:114	Ceramic	Bowl	E. Roman	HAM71.0667
1187	C.1:60:535	Glass	Bead		HAM71.0493
1188	C.4:2:319	Bronze	Coin	Byzantine	HAM71.0632
1189	C.6:5:10	Glass	Ring		HAM71.0494
1190	C.6:5:10	Limestone	Weight		HAM71.0495
1191	D.6:33E:90	Iron	Bangle		HAM71.0496
1192	D.6:33E:142	Iron	Arrowhead		DAJ
1193	D.6:33E:142	Iron	Arrowhead		HAM71.0497

1194	D.6:33H:149	Soapstone	Whetstone		DAJ
1195	D.6:33I:151	Iron	Ring		HAM71.0498
1196	D.6:33I:151	Iron	Ring		HAM71.0499
1197	D.6:33I:151	Iron	Nail		HAM71.0500
1198	F.1:2:27	Faience	Bead		HAM71.0501
1199	F.1:5:28	Faience	Bead		HAM71.0502
1200	F.1:5:28	Bronze	Ring		HAM71.0668
1201	F.5:4:3	Bronze	Nail		HAM71.0503
1202	F.5:4:3	Ceramic	Pendant		HAM71.0504
1203	F.5:4:3	Silver?	Bead		HAM71.0505
1204	F.8:6:9	Bronze	Earring		HAM71.0506
1205	C.1:67:545	Ceramic	Juglet		HAM71.0646
1206	B.3:46:81	Chert	Slingstone		HAM71.0507
1207	C.4:52:404	Bronze	Kohl Stick		HAM71.0508
1208	F.1:9:29	Glass	Bead		HAM71.0509
1209a-c	F.5:4:3	Glass	Beads		HAM71.0786
1210	F.5:4:3	Bone	Hairpin Fragment		HAM71.0510
1211a-v	F.5:4:3	Glass et al.	Beads		HAM71.0511
1212	F.5:4:3	Iron	Ring		HAM71.0512
1213	F.5:4:3	Bronze	Ring		HAM71.0513
1214	F.5:4:3	Amber	Ring		HAM71.0823
1215	F.5:4:3	Bronze	Ring		HAM71.0514
1216ab	B.2:35A:98	Limestone	Mortar & Pestle		HAM71.0515
1217	B.3:46:82	Iron	Arrowhead		HAM71.0516
1218	B.4:46:82	Ceramic	Loom Weight		HAM71.0517
1219	B.4:58:129	Limestone	Pestle		HAM71.0518
1220	F.1:7:31	Bronze	Ring		HAM71.0519
1221	F.1:8:32	Silver	Bangle		HAM71.0520
1222	F.1:8:32	Bronze	Bell		HAM71.0521
1223	A.5:1:62	Chert	Slingstone		HAM71.0522
1224	F.5:3:	Bronze	Coin	L. Roman	DAJ
1225	F.5:3:	Bronze	Coin	Byzantine	HAM71.0633
1226	D.6:47&48	Ceramic	Bowl	E. Roman	DAJ
1227	—	Ceramic	Lamp		HAM71.0527
1228	B.2:60:117	Bone	Pendant		HAM71.0529
1229	F.6:2,10:3,11	Ceramic	Jar Fragments		HAM71.0530
1230	F.5:2:2	Ceramic	Lamp		HAM71.0647
1231	F.5:2:2	Ceramic	Lamp		HAM71.0648
1232	D.6:49:136A	Ceramic	Lamp		HAM71.0649
1233	—	Ceramic	Lamp		HAM71.0650
1234	F.5:2:2	Ceramic	Juglet		HAM71.0840
1235	F.5:2:2	Ceramic	Cooking Pot		HAM71.0651
1236	C.4:53:278	Bone	Infant Skeleton		HAM71.0655
1237	F.1::	Glass	Bottle Base		HAM71.0792
1238	D.6:33:152	Ceramic	Jug		HAM71.0798
1239	F.1:1C:21	Ceramic	Lamp	E. Roman	HAM71.0805
1240	F.1:2B:22	Ceramic	Lamp	E. Roman	HAM71.0806
1241	F.1:2:17	Ceramic	Juglet	E. Roman	HAM71.0807
1242	F.1:1G:12, 16	Ceramic	Jug	E. Roman	HAM71.0808
1243	F.1:2:25	Ceramic	Bowl	E. Roman	HAM71.0809
1244	F.1:2B:13, 33	Ceramic	Bowl	E. Roman	HAM71.0810
1245	F.1:2:17, 27	Ceramic	Bowl	E. Roman	HAM71.0811
1246	F.1::28, 29, 32	Ceramic	Bowl	E. Roman	HAM71.0812
1247	F.1:2A:16	Ceramic	Bowl	E. Roman	HAM71.0813
1248	F.1:2A:17	Ceramic	Bowl	E. Roman	HAM71.0814
1249	F.1:2:10	Ceramic	Cooking Pot	E. Roman	HAM71.0815
1250	F.1:2:2	Ceramic	Jar Fragments	E. Roman	HAM71.0816
1251	F.10:5:	Wood	Inlays		HAM71.0817

1252	A.5:49:68	Ceramic	Bowl	Nabataean	HAM71.0824
1253	B.2:27:67A	Pumice	Rubbing Stone		HAM71.0825
1254	—	Ceramic	Disc		HAM71.0826
1255	—	Agate	Bead		HAM71.0827
1256	—	Bone?	Bead		HAM71.0828
1257	—	Onyx	Bead		HAM71.0829
1258	—	Glass	Bead		HAM71.0830
1259	—	Glass	Bead		HAM71.0831
1260	—	Ceramic	Fragment		HAM71.0833
1261	B.4:15:47	Ceramic	Roof Tile		HAM71.0834
1262	B.4:13:54	Ceramic	Roof Tile		HAM71.0835
1263	C.4:19:206	Ceramic	Roof Tile		HAM71.0836
1301	D.3:21:	Ivory	Inlay		HAM73.0054
1302	D.3:21:	Bone	Hairpin		HAM73.0055
1303	C.2:16:	Ivory	Stylus?		DAJ
1304	D.3:22:80	Ivory	Inlay		HAM73.0056
1305	D.3:22:80	Ivory	Inlay		HAM73.0057
1306	D.3:22:80	Ivory	Inlay		HAM73.0058
1307	C.6:16:25	Limestone	Architectural Fragment		DAJ
1308	D.6:57:160	Iron	Weight		HAM73.0059
1309	D.6:57:160	Basalt	Saddle Quern Fragment		—
1310	D.6:57:160	Stone	Grinder		HAM73.0060
1311	D.3:21:79	Stone	Grinder		HAM73.0061
1312	C.3:12:102	Limestone	Mortar Fragment		HAM73.0062
1313	B.2:72:	Basalt	Vessel Fragment		HAM73.0375
1314	C.3:12:103	Ceramic	Lamp	Mamluk	DAJ
1315	G.1:1:1	Clay	Spindle Rest		HAM73.0063
1316	D.3:21:79	Basalt	Rubbing Stone		HAM73.0064
1317	B.2:72:130	Basalt	Rubbing Stone		HAM73.0065
1318	B.2:72:130	Chert	Slingstone		HAM73.0066
1319	B.2:73:133	Basalt	Rubbing Stone		HAM73.0067
1320	B.2:73:133	Chert	Slingstone		HAM73.0068
1321	B.4:82:143	Iron	Ring		HAM73.0069
1322	B.4:82:143	Iron	Hook		HAM73.0070
1323	C.3:12:106	Iron	Blade		HAM73.0071
1324	B.2:74:137	Copper	Bar		HAM73.0072
1325	G.2:2:3	Bronze	Cosmetic Rod		HAM73.0073
1326	D.4:1:3	Bronze	Bangle		HAM73.0074
1327	C.2:9:305	Schist	Vessel Fragment		HAM73.0075
1328	C.3:5:107	Glass	Bead		DAJ
1329	B.1:119:318	Iron	Blade Point		HAM73.0076
1330	D.4:1:4	Iron	Nail		HAM73.0077
1331	C.3:5:109	Iron	Spike		HAM73.0078
1332	C.3:5:109	Iron	Spike		HAM73.0079
1333	C.2:9:307	Basalt	Quern		HAM73.0080
1334	G.2:2:1	Iron	Bangle		HAM73.0081
1335	G.2:2:1	Iron	Spike		HAM73.0082
1336	G.2:2:1	Iron	Nail		HAM73.0083
1337	G.2:2:1	Iron	Bangle Fragment		HAM73.0084
1338	G.2:2:1	Iron	Bangle Fragment		HAM73.0085
1339	G.2:2:1	Bronze	Cosmetic Rod		HAM73.0086
1340	C.3:5:	Iron	Spike		HAM73.0087
1341	C.3:5:	Iron	Nail		HAM73.0088
1342	G.2:2:1	Glass	Base	Roman	DAJ
1343	B.2:72:140	Bronze	Fibula		HAM73.0089
1344	F.12:2:4	Frit	Scarab		DAJ
1345	C.2:Cleanup:	Ivory	Needle Case		HAM73.0090
1346	F.12:6:11	Ceramic	Lamp	L. Roman	DAJ

1347	D.4:1:3	Ceramic	Spindle Whorl		HAM73.0091
1348	C.3:12:103	Limestone	Worked Stone		HAM73.0092
1349	F.12:4:8	Glass	Bead		HAM73.0093
1350	A.7:1:24	Ceramic	Bead		HAM73.0094
1351	B.4:93:159	Iron	Nail		HAM73.0095
1352	A.7:5:16	Iron	Key		HAM73.0096
1353	A.6:44:51	Stone	Vessel Fragment		DAJ
1354	G.2:2:2	Ceramic	Juglet	Mamluk	HAM73.0097
1355	C.1:75:609	Clay	Lamp	Hellenistic	DAJ
1356	C.1:74:606	Clay	Lamp	E. Roman	DAJ
1357	F.Survey:	Chert	Slingstone		HAM73.0098
1358	B.3:58:96	Limestone	Mortar		HAM73.0099
1359	B.3:58:96	Iron	Strip		HAM73.0100
1360	F.12:4:9	Iron	Bangle		HAM73.0101
1361	F.12:5:	Bronze	Brooch		DAJ
1362	F.12:5:10	Glass	Bead		HAM73.0102
1363	F.12:5:10	Iron	Bangle Fragment		HAM73.0103
1364	B.3:58:96	Bronze	Garment Pin		HAM73.0104
1365	D.2:16:112	Bronze	Arrowhead		DAJ
1366	D.6:63b:174	Basalt	Upper Millstone Fragment		—
1367	B.4:34:165	Limestone	Door Socket		—
1368	A.7:7:29	Iron	Nail Head		HAM73.0105
1369	D.6W:27:175	Iron	Spike		HAM73.0106
1370	C.3:8:122	Basalt	Spindle Whorl		HAM73.0107
1371	D.4:1:11	Basalt	Slingstone		DAJ
1372	C.2:18:327	Chert	Slingstone		HAM73.0108
1373	A.6:2:75	Iron	UD		HAM73.0109
1374	D.4:7:14	Iron	Spike		HAM73.0110
1375	D.6:36:178	Iron	Nail		HAM73.0111
1376a-d	F.12:4:11	Iron	Nails		HAM73.0112
1377	F.12:4:11	Bronze	Chain Link		HAM73.0113
1378	F.14:1:3	Bronze	Earring		HAM73.0114
1379	F.12:6:12	Iron	Bangle		HAM73.0115
1380	F.12:5:10	Bronze	Bangle		HAM73.0116
1381	F.12:5:10	Bronze	Bangle Fragment		HAM73.0117
1382	B.3:61:100	Iron	Nail		HAM73.0118
1383	D.4:7:16	Iron	Cosmetic Spatula		HAM73.0119
1384	B.4:94:185	Iron	Spike		HAM73.0120
1385	A.7:18-S:41	Iron	Spike		HAM73.0121
1386ab	D.5::84	Iron	Spikes		HAM73.0122
1387	D.2:16:113	Stone	Tesserae		HAM73.0123
1388	C.3:11:123	Basalt	Rubbing Stone		HAM73.0124
1389	B.4:94:184	Ivory	Hairpin		DAJ
1390	D.3:37:100	Limestone	Architectural Fragment		DAJ
1391	B.4:91:153	Ceramic	Juglet	L. Roman	HAM73.0125
1392	B.1:119:318	Ceramic	Lamp	Iron	HAM73.0126
1393	C.3:17:132	Iron	Arrowhead		HAM73.0127
1394	C.3:17:132	Iron	Hook		HAM73.0128
1395	F.14:3:7	Lead	Earring		HAM73.0129
1396	B.2:44:153	Basalt	Weight		HAM73.0130
1397	F.14:1:4	Bronze	Bangle Fragment		HAM73.0131
1398	D.4:4:20	Bronze	Buckle		HAM73.0132
1399	B.3:62:104	Bone	Weaving-pattern Spatula		HAM73.0133
1400	B.3:62:104	Bone	Weaving-pattern Spatula		HAM73.0134
1401	B.2:83:154	Ceramic	Spindle Whorl		HAM73.0135
1402	D.1:55:179	Iron	Spike		HAM73.0136
1403	D.4:8:22	Iron	Nail		HAM73.0137
1404	B.2:83:154	Chert	Slingstone		HAM73.0138

1405	B.4:118:200	Basalt	Vessel Fragment		HAM73.0139
1406	B.3:62:104	Limestone	Door Socket		—
1407	C.2:20:323	Ceramic	Lamp Fragment	E. Islamic	HAM73.0140
1408	A.7:1:30	Ceramic	Lamp	E. Islamic	HAM73.0141
1409	C.1:94:639	Limestone	Spindle Whorl		HAM73.0142
1410	C.1:94:639	Limestone	Vessel Fragment		HAM73.0143
1411	G.1:18:37	Granite	Spindle Whorl		DAJ
1412	D.2:28:132	Bronze	Hinge		HAM73.0144
1413	B.4:122:206	Basalt	Spindle Whorl		HAM73.0145
1414	D.6W:62:192	Ivory	Jar Lid		HAM73.0146
1415	D.2:28:133	Serpentine	Spindle Whorl		HAM73.0147
1416	C.3:21:148	Ceramic	Bead		HAM73.0148
1417	D.2:28:133	Ceramic	Pot Lid Handle		HAM73.0149
1418	B.3:62:105	Bone	Weaving-pattern Spatula		HAM73.0150
1419	C.3:7:131	Lead	Figurine Head		HAM73.0151
1420	B.4:116:213	Bronze	Bowl		HAM73.0152
1421	A.7:38:72	Iron	Nail		HAM73.0153
1422	C.3:21:154	Iron	Nail		HAM73.0154
1423	D.4:12:27	Iron	Hook		HAM73.0155
1424	F.17:2:1	Iron	Hook		HAM73.0156
1425	D.2:29:137	Iron	Nail		HAM73.0157
1426	C.2:24:354	Limestone	Upper Millstone Fragment		—
1427	B.3:62:110	Basalt	Mace Head		DAJ
1428	C.2:24:363	Limestone	Vessel Fragment		HAM73.0158
1429	C.2:24:364	Limestone	Vessel Fragment		HAM73.0159
1430	C.2:24:364	Limestone	Vessel Fragment		HAM73.0160
1431	B.2:83:155	Chert	Slingstone		HAM73.0161
1432	D.4:12:35	Shell	Bead		HAM73.0162
1433	B.4:130:233	Basalt	Saddle Quern		—
1434	C.2:24:364	Basalt	Muller Fragment		HAM73.0163
1435	C.2:24:366	Basalt	Muller Fragment		HAM73.0164
1436	D.4:4:34	Iron	Nail		HAM73.0165
1437	D.1:53:170	Ceramic	Lamp	Hellenistic	HAM73.0166
1438	C.3:14:128	Ceramic	Lamp Fragment		HAM73.0167
1439	C.2:18:332	Ceramic	Inscribed Roof Tile		HAM73.0168
1440	A.7:48:97	Glass	Bead		HAM73.0169
1441	C.2:28:383	Glass	Bead		HAM73.0170
1442	D.4:4:34	Bone	Die		HAM73.0171
1443	D.4:12:35	Cloth	Pouch		HAM73.0172
1444	B.3:67:112	Basalt	Cosmetic Mortar		DAJ
1445	C.2:28:372	Limestone	Scoop		HAM73.0173
1446	B.3:56:113	Glass	Bead		HAM73.0174
1447	D.6W:2:216	Quartz	Bead		HAM73.0175
1448	A.7:24:94	Iron	Sickle		HAM73.0176
1449	D.2:23:160	Granite	Spindle Whorl		DAJ
1450	D.6W:2:217	Limestone	Spindle Whorl Fragment		HAM73.0177
1451	A.7:47:106	Iron	Nail		HAM73.0178
1452	C.2:28:382	Chert	Slingstone		HAM73.0179
1453	B.4:82:252	Chert	Slingstone		HAM73.0180
1454	D.1:56:215	Chert	Slingstone		HAM73.0181
1455	B.2:82:181	Limestone	Slingstone		HAM73.0182
1456	G.1:25:52	Serpentine	Spindle Whorl		HAM73.0183
1457	F.14:8:22	Bronze	Cosmetic Spatula		HAM73.0184
1458	D.4:4:	Iron	Hook		HAM73.0185
1459	G.1:23:51	Faience	Bead		HAM73.0186
1460	D.1:5:215	Carnelian	Bead		DAJ
1461	B.4:150:251	Glass	Bead		DAJ
1462	C.3:12:	Glass	Vessel		HAM73.0187

1463	B.4:105:191	Ceramic	Lamp	E. Roman	HAM73.0188
1464	C.2:22:	Glass	Bead		HAM73.0189
1465	B.2:1:184	Glass	Bead		HAM73.0190
1466	D.4:4:52	Faience	Bead		HAM73.0191
1467	C.2:32:401	Glass	Bead		HAM73.0192
1468	C.1:84:694	Bronze	Earring		HAM73.0193
1469	B.4:82:259	Iron	Clamp		HAM73.0194
1470	A.7:38:121	Bronze	Kohl Stick		HAM73.0195
1471	A.7:56:124	Iron	Nail		HAM73.0196
1472	A.7:3:127	Ceramic	Weight		DAJ
1473	F.11B:1:1	Ceramic	Vessel	L. Roman	HAM73.0197
1474	B.3:61:101	Ceramic	Lamp Fragment	Hellenistic	DAJ
1475	B.3:61:101	Ceramic	Plate	Hellenistic	HAM73.0198
1476	F.14:7:17	Ceramic	Cooking Pot	Roman	HAM73.0199
1477	F.14:7:13	Ceramic	Cooking Pot	Roman	HAM73.0200
1478	D.6W:69:227	Serpentine	Bead		HAM73.0201
1479	D.4:17:58	Ceramic	Spindle Whorl		HAM73.0202
1480	F.16:6:15	Glass	Bead		DAJ
1481	F.16:6:16	Glass	Bead		DAJ
1482	F.16:6:16	Glass	Bead		HAM73.0203
1483	F.16:6:16	Glass	Bead		HAM73.0204
1484	F.16:6:16	Glass	Bead		HAM73.0205
1485	A.8:1:1	Glass	Bead		HAM73.0206
1486	G.1:45:71	Chert	Slingstone		HAM73.0207
1487	B.5:70:118	Chert	Slingstone		HAM73.0208
1488	C.1:41:	Basalt	Vessel Fragment		—
1489	A.6:59:134	Limestone	Upper Millstone Fragment		HAM73.0209
1490	D.4:18:69	Lead	Weight		DAJ
1491	C.3:20:194	Bronze	Hook		HAM73.0210
1492	C.1:89:715	Bronze	Cosmetic Rod		HAM73.0211
1493	F.16:5:19	Bronze	Bangle		HAM73.0212
1494	F.16:6:15	Bronze	Bangle		HAM73.0213
1495	F.16:6:16	Bronze	Bangle		HAM73.0214
1496	F.16:6:16	Bronze	Earring		HAM73.0215
1497	D.3:33:142	Bronze	Cosmetic Spatula		HAM73.0216
1498	B.2:18:180	Bronze	Bangle		HAM73.0217
1499	F.18:4:7	Shell	Pendant		HAM73.0218
1500	F.4:7:18	Bronze	UD		HAM73.0219
1501	C.1:88:785	Bone	Weaving-pattern Spatula		HAM73.0220
1502	C.1:89:715	Bone	Weaving-pattern Spatula		HAM73.0221
1503	C.1:86:706	Bone	Weaving-pattern Spatula		DAJ
1504ab	F.16:4:19	Bone	Spindle & Whorl		DAJ
1505/08	F.16:5:19-20	Bone	Cosmetic Applicator		HAM73.0224
1506	A.8:1:1	Basalt	Mace Head		HAM73.0222
1507	F.18:5-7:8-10	Glass	Beads (10)		HAM73.0223
1509	C.1:93:723	Ceramic	Loom Weight		HAM73.0225
1510	C.3:23:172	Bronze	Toy Bird		DAJ
1511	D.4:18:70	Bone	Needle		HAM73.0226
1512ab	F.18:5-7:8-10	Bone	Needles		HAM73.0227
1513	F.16:5:20	Bronze	Bangle		HAM73.0228
1514	F.16:5:20	Bronze	Bangle		HAM73.0229
1515	A.5:61-62:	Bronze	Coin	Maccabean	HAM73.0230
1516	A.7:5:33	Bronze	Coin		HAM73.0231
1517	A.6:3:78	Bronze	Coin	Byzantine	HAM73.0232
1518	A.6:4:87	Bronze	Coin	Mamluk	HAM73.0233
1519	A.6:4:87	Bronze	Coin	Mamluk	HAM73.0234
1520	A.6:4:87	Bronze	Coin	Mamluk	HAM73.0235
1521	B.3:49:83	Silver	Coin	Roman	HAM73.0236

1522	B.4:surface:113	Bronze	Coin	Roman	DAJ
1523	B.4:124:209	Bronze	Coin	Maccabean	HAM73.0237
1524	D.6:56:238	Bronze	Coin	E. Roman	HAM73.0238
1525	D.3:24:81	Bronze	Coin	Byzantine	HAM73.0239
1526	D.6:59:167	Bronze	Coin	Byzantine	HAM73.0240
1527	D.4:1:3	Bronze	Coin	Mamluk	HAM73.0241
1528	D.1:53:169	Bronze	Coin	Nabataean	HAM73.0242
1529	F.16:4:17	Bronze	Coin	Byzantine	HAM73.0243
1530	G.1:1:1	Bronze	Coin	Ayyubid	HAM73.0244
1531	G.1:5:7	Bronze	Coin	Byzantine	HAM73.0245
1532	G.1:5:7	Bronze	Coin	Mamluk	HAM73.0246
1533	C.1:9:14	Bronze	Coin	Ayyubid	DAJ
1534	F.18:6:9	Gold	Earring		HAM73.0247
1535	F.16:5:19	Glass	Jar		HAM73.0248
1536	F.16:5:19	Glass	Vessel		DAJ
1537	F.18::11	Glass	Vessel		DAJ
1538	B.2:80:150	Bronze	Coin	Byzantine	HAM73.0249
1539	B.5:8:7	Bronze	Coin	Byzantine	HAM73.0250
1540	A.7:61:152	Bronze	Coin	Byzantine	HAM73.0251
1541	F.16:5:20	Bronze	Coin	Byzantine	HAM73.0252
1542	Survey, Site 61	Basalt	Mace Head		HAM73.0253
1543	G.1:45:74	Limestone	Muller		HAM73.0254
1544	D.1:59:239	Ceramic	Loom Weight		HAM73.0255
1545	D.6:62:263	Chert	Slingstone		HAM73.0256
1546	A.8:1:3	Iron	Spike		HAM73.0257
1547	B.1:143:386	Iron	Arrowhead		HAM73.0258
1548	A.7:61?:167	Bronze	Ring		HAM73.0259
1549	D.3:26:145	Bronze	Ring		HAM73.0260
1550	D.6:62:263	Bronze	Chain Link		HAM73.0261
1551	F.16:5:20	Iron	Bangle		HAM73.0262
1552	F.16:5:20	Bronze	Bangle		HAM73.0263
1553	F.16:5:20	Bronze	Bangle		HAM73.0264
1554	F.18:3:	Bronze	Ring		HAM73.0265
1555	F.18:13:	Bronze	Bell		HAM73.0266
1556	F.18:13	Frit	Amulet		DAJ
1557ab	F.18:13:	Glass	Beads		HAM73.0267
1558ab	F.18:13:	Glass	Beads		HAM73.0268
1559	F.18:13:	Quartz	Bead		HAM73.0269
1560ab	F.18:13:	Faience	Beads		HAM73.0270
1561	B.1:143:378	Ceramic	Ostracon	Iron 2/Persian	HAM73.0271
1562	F.18:24:19	Gold	Earring		HAM73.0272
1563	A.7:24:89, 98	Ceramic	Cooking Pot		DAJ
1564	Survey, Site 29	Ceramic	Incised Jar Handle		HAM73.0273
1565	F.18:24:19	Glass	Vessel		HAM73.0274
1566	F.18:8:15	Glass	Bottle		DAJ
1567	F.18:8:15	Glass	Bottle		HAM73.0275
1568	F.18:16:24	Glass	Bottle		DAJ
1569	F.14:8:23	Ceramic	Bowl	Roman	DAJ
1570	F.14:9:29	Ceramic	Bowl	Roman	HAM73.0276
1571	F.18:13:	Ceramic	Bowl	L. Roman	HAM73.0277
1572	F.18:20:	Ceramic	Cooking Pot	L. Roman	DAJ
1573	F.18:13:	Ceramic	Cooking Pot	E. Roman	DAJ
1574	F.18:15:	Ceramic	Cooking Pot	E. Roman	HAM73.0278
1575	F.18:15:29	Ceramic	Jug	L. Roman	HAM73.0279
1576	B.1:143:395	Ceramic	Horsehead Figurine	Iron 2/Persian	DAJ
1577	F.18:16:24	Ceramic	Lamp	L. Roman	HAM73.0280
1578	F.18:8:34	Ceramic	Lamp	E. Roman	HAM73.0281
1579	D.1:41:253	Ceramic	Lamp Handle	Byzantine	HAM73.0282

1580	F.18:8:34	Glass	Vessel		HAM73.0283
1581	F.18:24:19	Ceramic	Lamp	Byzantine	HAM73.0284
1582	F.16:8:20	Clay	Juglet	L. Roman	DAJ
1583	F.18:8:15	Ceramic	Bottle	L. Roman	HAM73.0285
1584	A.8:7:8	Ceramic	Lamp	E. Islamic	DAJ
1585	F.18:17:28	Gold	Earring		DAJ
1586	F.18:8:34	Ceramic	Cooking Pot	E. Roman	DAJ
1587	F.18:8:34	Ceramic	Bowl	L. Roman	HAM73.0286
1588	F.16:8:42	Ceramic	Cup	Roman	DAJ
1589	Survey	Ceramic	Bowl	Islamic	DAJ
1590	F.18:21:41	Ceramic	Lamp	E. Roman	HAM73.0287
1591	A.7:24:83-85, 94	Ceramic	Jug	Islamic	DAJ
1592	F.18:21:41	Gold	Earring		DAJ
1593	A.7:73:179	Bone	Incised Handle		HAM73.0288
1594ab	C.1:96:740	Limestone	Mortar & Pestle		HAM73.0289
1595	C.2:40-48:475	Ceramic	Figurine Head	Iron 2/Persian	HAM73.0290
1596a-c	F.18:21:41	Serpentine	Spindle Whorls		HAM73.0291
1597	F.18:8:15	Bronze	Ring		HAM73.0292
1598	Survey, Site 82	Stone	UD		HAM73.0293
1599	B.4:153:281	Ceramic	Loom Weight		HAM73.0294
1600	C.3:41:228	Chert	Slingstone		HAM73.0295
1601	B.3:73:124	Basalt	Mace Head		HAM73.0296
1602	D.3:52:174	Stone	Spindle Rest		HAM73.0297
1603	C.1:96:754	Bone	Weaving-pattern Spatula		HAM73.0298
1604	F.18:21:41	Bronze	Kohl Stick		HAM73.0299
1605	F.18:21:41	Bronze	Bell		HAM73.0300
1606	F.18:8:42	Bronze	Pendant		HAM73.0301
1607	F.18:21:41	Bone	Hairpin		DAJ
1608	F.18:21:41	Bone	Hairpin		HAM73.0302
1609	F.18:29:45	Ceramic	Lamp	L. Roman	DAJ
1610	F.18:29:45	Ceramic	Lamp	L. Roman	HAM73.0303
1611	D.4:28:75	Ceramic	Bowl	E. Roman	DAJ
1612	F.18:22:43	Glass	Vessel Fragment		HAM73.0304
1613	F.18:22:43	Glass	Vessel Fragment		HAM73.0305
1614a-c	F.18:21:41	Bone	Needle Fragments		—
1615ab	F.18:18:38	Bone	Needle Fragments		HAM73.0306
1616a-c	F.18:22:43	Bone	Needle & Hairpin Fragments		HAM73.0307
1617ab	F.18:19:39	Bone	Needle & Hairpin Fragments		HAM73.0308
1618	G.3:9:10	Bone	Weaving-pattern Spatula		HAM73.0309
1619	F.18:8:15	Bone	Jar Lid		HAM73.0310
1620	G.3:2:1	Glass	Bead		HAM73.0311
1621	F.18:22:43	Bronze	Kohl Stick		HAM73.0312
1622	B.4:Cleanup:	Serpentine	Bead		HAM73.0313
1623	C.1:96:758	Bone	Spindle Whorl		HAM73.0314
1624	D.3:59:191	Stone	Pendant-Seal		DAJ
1625	B.2:94:237	Faience	Scarab	Iron 2/Persian	HAM73.0315
1626	C.2:40:492	Stone	Seal		HAM73.0316
1627	D.4:34:82	Glass	Bead		HAM73.0317
1628	D.2:36:195	Iron	Hook		HAM73.0318
1629	A.7:2:180	Ceramic	Rattle		DAJ
1630ab	A.7:2:180	Ceramic	Weights		HAM73.0319
1631	B.1:143:376	Ceramic	Animal Figurine Fragment	Iron 2/Persian	DAJ
1632	C.2:35:437	Ceramic	Game Board		HAM73.0320
1633	C.2:44:471	Ceramic	Incised Sherd		HAM73.0321
1634	D.3:52:180	Basalt	Vessel Fragment		HAM73.0322
1635	C.1:83:709	Ceramic	Embossed Sherd		DAJ
1636	B.4:127:308	Basalt	Rubbing Stone		HAM73.0323
1637	C.2:40:491	Limestone	Vessel Fragment		DAJ

1638	A.7:74:191	Ivory?	Cosmetic Spoon		DAJ
1639	A.7:74:191	Iron	Spike		HAM73.0324
1640	A.7:74:191	Iron	Hook		HAM73.0325
1641	A.7:74:191	Bronze	Clamp		HAM73.0326
1642	G.3:2:1	Bronze	Coin	Ayyubid	HAM73.0327
1643	D.1:43:250	Bronze	Coin	Byzantine	DAJ
1644	B.4:166:	Bronze	Coin	Hellenistic	HAM73.0328
1645	B.4:120E:295	Bronze	Coin	Nabataean	DAJ
1646	B.3:72:122	Bronze	Coin	Nabataean	HAM73.0329
1647	D.2:36:207	Bronze	Coin	E. Roman	HAM73.0330
1648	F.12:5:10	Bronze	Coin		HAM73.0331
1649	D.6:56C:243	Bronze	Coin		DAJ
1650	F.18:8:15	Bronze	Coin	Nabataean	HAM73.0332
1651	F.18:8:15	Bronze	Coin	Nabataean	HAM73.0333
1652	F.18:8:15	Bronze	Coin	Nabataean	HAM73.0334
1653	F.18:8:15	Bronze	Coin	Nabataean	DAJ
1654	F.18:8:15	Bronze	Coin	Nabataean	DAJ
1655	F.18:8:15	Bronze	Coin		HAM73.0335
1656	B.2:94:222	Ceramic	Ostracon	Iron 2/Persian	DAJ
1657	B.1:143:402	Ceramic	Ostracon	Iron 2/Persian	DAJ
1658	B.2:72:130	Ceramic	Ostracon		DAJ
1659	B.2:72:130	Ceramic	Ostracon?		DAJ
1660	C.2:40:511	Steatite	Bead		HAM73.0336
1661	B.4:120:327	Chert	Slingstone		HAM73.0337
1662	A.7:E Balk:194?	Bronze	UD		HAM73.0338
1663	G.3:24:22	Olive Pit	Bead		HAM73.0339
1664	G.3:24:22	Bronze	Kohl Stick Fragment		HAM73.0340
1665	C.2:42:452	Ceramic	Cooking Pot	L. Roman	HAM73.0341
1666	F.18:17	Ceramic	Lamp Fragment	L. Roman	HAM73.0342
1667	B.4:175:320	Limestone	Upper Millstone Fragment		—
1668	B.4:120W:343	Ceramic	Ostracon	Hellenistic	DAJ
1669	C.2:51:514	Bone	Weaving-pattern Spatula		DAJ
1670	B.6:7:13	Iron	Knife Blade		HAM73.0343
1671	B.4:186:349	Ceramic	Spindle Whorl		HAM73.0344
1672	C.2:51:513	Chert	Slingstone		HAM73.0345
1673	C.2:51:513	Chert	Slingstone		HAM73.0346
1674	C.2:51:513	Basalt	Rubbing Stone		HAM73.0347
1675	D.3:52:180	Ceramic	Incised Handle		HAM73.0348
1676	C.2:44:503	Ceramic	Incised Sherd	Iron 2/Persian	DAJ
1677	Survey, Site 95	Ceramic	Inscribed Base	Islamic	HAM73.0349
1678	A.7:E Balk:199	Bronze	Ring		HAM73.0350
1679	B.2:75:245	Coral	Bead		HAM73.0351
1680	G.3:29:33	Glass	Weight		DAJ
1681	C.2:44:503	Ceramic	Figurine, Zoomorphic	Iron 2/Persian	HAM73.0352
1682	D.4:34:88	Plaster	Architectural Decoration		HAM73.0353
1683	B.4:186:349	Basalt	Vessel Fragment		HAM73.0354
1684a-j	A.7:29:114	Ceramic	Weights		HAM73.0355
1685	D.2:41:222	Ceramic	Bowl	l. Roman	HAM73.0356
1686	A.7:5:36	Glass	Lamp		HAM 79.0001
1696	B.4:254:462	Chert	Slingstone		HAM74.0416
1701	A.5:77:85	Bronze	Coin	Byzantine	HAM74.0052
1702	A.7:97:259	Bronze	Coin	L. Roman	HAM74.0053
1703	D.3:57A:216	Faience	Bead		HAM74.0054
1704	B.4:205:373B	Flint	Blades		HAM74.0055
1705	C.7:1:9	Flint	Blade		HAM74.0056
1706	D.15:65:288	Limestone	Mortar Fragment		—
1707	D.4:40F:108	Limestone	Mortar Fragment		HAM74.0421
1708	B.3:93:153	Limestone	Mortar Fragment		—

1709	D.3:57C:234	Ceramic	Spindle Whorl		HAM74.0057
1710	C.5:E Balk:	Copper	Coin	L. Roman	HAM74.0058
1711	A.9:10:20	Bronze	Coin	Byzantine	HAM74.0059
1712	C.6:22:36	Bronze	Coin	Mamluk	HAM74.0060
1713	D.2:44:239	Bronze	Coin	L. Roman	HAM74.0061
1714	A.7:95:256	Bronze	Tack Fragment		HAM74.0062
1715	C.7:1:9	Iron	Nail Fragment		HAM74.0063
1716	D.1:65:	Iron	Nail		HAM74.0064
1717	D.1 N:71:403	Iron	Nail		HAM74.0065
1718	D.2:67:277	Iron	Arrowhead		HAM74.0066
1719	D.3:81:308	Bronze	Arrowhead		HAM74.0067
1720	C.6:14:21	Bronze	Ring		HAM74.0068
1721	A.7:100:262	Ceramic	Bowl	Roman	HAM74.0069
1722	Survey, Site 108	Flint	Blades		HAM74.0070
1723	Survey, Site 107	Flint	Worked Flints		HAM74.0071
1724	D.3:64:206	Limestone	Vessel Fragment		HAM74.0072
1725	D.3:57A:220	Limestone	Vessel Fragment		HAM74.0073
1726	D.2:44:	Ceramic	Weight		HAM74.0074
1727	B.2:118:261	Bone	Weaving-pattern Spatula		HAM74.0075
1728	B.4:205:372	Shell	Pendant		HAM74.0076
1729	C.5:66:217	Lead?	Bar		HAM74.0077
1730	C.5:66:218	Bronze	Coin	Maccabean	HAM74.0078
1731	G.9:2:3	Bronze	Coin	Byzantine	DAJ
1732	D.1N:72:404	Basalt	Vessel Fragment		HAM74.0422
1733	C.3:59:291	Bronze	Coin		HAM74.0079
1734	B.6:5:7	Iron	Knife Blade		HAM74.0080
1735	A.9:7:38	Bronze	Coin	Mamluk	HAM74.0081
1736	G.5:31:48	Bronze	Coin	Byzantine	HAM74.0082
1737	A.8:1:13	Bronze	Coin	Umayyad	HAM74.0083
1738	E.4:4:26	Bronze	Coin	Ayyubid	HAM74.0084
1739	D.3:67:249	Copper	Coin	Nabataean	HAM74.0085
1740	D.3:57C:268	Bronze	Coin	Nabataean	HAM74.0086
1741	B.7:10:24	Bronze	Coin	Mamluk	HAM74.0087
1742	C.7:23:32	Iron	Bar		HAM74.0088
1743	D.4:41:120	Copper	Coin	E. Roman	DAJ
1744	C.7:16:21	Iron	Bar		HAM74.0089
1745	B.7:10:31	Iron	Nail		HAM74.0090
1746	B.7:10:31	Iron	Nail		HAM74.0091
1747	C.3:44:	Bronze	Cosmetic Spoon		HAM74.0092
1748	A.9:19:23	Bronze	Ring & Finger Bone		DAJ
1749	D.3:57B:222	Limestone	Vessel Fragment		HAM74.0093
1750	A.7:100:262	Iron	Nail		HAM74.0094
1751	A.9:7:9	Iron	Nail Fragment		HAM74.0095
1752	A.9:14:13	Glass	Bead		HAM74.0096
1753	D.2:45:235	Carnelian	Bead		HAM74.0097
1754	A.7:97:259	Iron	Nail		HAM74.0098
1755	A.9:9:6	Iron	Nail		HAM74.0099
1756	D.3:57B:222	Bronze	Kohl Stick		HAM74.0100
1757	B.4:202:366	Bronze	Needle		HAM74.0101
1758	A.7:97:264	Iron	Nail		HAM74.0102
1759	B.7:3:7	Bronze	Ring		HAM74.0103
1760	D.2:53:249	Iron	Nail		HAM74.0104
1761	A.9:13:28	Iron	Nail		HAM74.0105
1762	D.3:57C:261	Iron	Axe Head		HAM74.0106
1763	A.9:8:32	Iron	Nail		HAM74.0107
1764	A.9:19:256	Silver, Glass	Mirror		DAJ
1765	B.2:62:271	Bronze	Arrowhead		HAM74.0108
1766	D.3:78:290	Iron	Nail		HAM74.0109

1767	D.3:78:290	Bronze	Coin	E. Roman	HAM74.0110
1768	B.4:211:381	Bronze	Coin	E. Roman	DAJ
1769	C.6:11:15	Bronze	Coin	Ayyubid	HAM74.0111
1770	C.6:10:13	Iron	Ring		HAM74.0112
1771	C.6:11:15	Bronze	Ring		HAM74.0113
1772	C.6:10:12	Iron	Hook		HAM74.0114
1773	D.2:43:270	Iron	Nail		HAM74.0115
1774	D.2:43:272	Iron	Nail		HAM74.0116
1775	G.5A:8:10	Plastic?	Bead		HAM74.0117
1776	A.9:6:45	Iron	Nail Fragment		HAM74.0118
1777	B.7:9:20	Basalt	Rubbing Stone		HAM74.0119
1778	Survey, Site 110	Stone	Tesserae		HAM74.0120
1779	Survey, Site 115	Stone	Tesserae		HAM74.0121
1780	B.4:209:379	Flint	Blade		HAM74.0122
1781	C.5:59:169	Limestone	Pestle		HAM74.0123
1782	D.3:57E:285	Limestone	Weight		HAM74.0124
1783	A.5:62B:100	Ceramic	Loom Weight Fragment		HAM74.0125
1784	C.7:14:28	Limestone	Decorated Stone		HAM74.0126
1785	D.2:47:265	Limestone	Vessel Fragment		HAM74.0127
1786	C.5:56:182	Shell	Pendant		HAM74.0128
1787	A.9:26:51	Ceramic	Bowl	Mamluk	DAJ
1788	D.1:86:430	Stone	Stone Sample		HAM74.0129
1789	C.2:58:588	Chert	Slingstone		HAM74.0130
1790	D.3:57D:271	Limestone	Vessel Fragment		HAM74.0131
1791	C.5:62:181	Stone	Spindle Whorl		HAM74.0132
1792	C.1:105:799	Chert	Slingstone		HAM74.0133
1793	B.4:205:403	Ceramic	Figurine	Iron 2/Persian	HAM74.0134
1794	D.1S:68:305	Chert	Slingstone		HAM74.0135
1795	B.7:4:12	Shell	Pendant		HAM74.0136
1796	C.1:109:800	Flint	Worked Stone Frament.		HAM74.0137
1797	Survey, Site 29	Ceramic	Inscribed Jar Handle		HAM74.0138
1798	D.1 S:63D:301	Chert	Slingstone		HAM74.0139
1799	D.2:43:273	Bronze	Button		HAM74.0140
1800	C.6:16:28	Iron	Nail		HAM74.0141
1801	F.19:1:1	Flint	Blade		HAM74.0142
1802	C.7:24:36	Bronze	UD		HAM74.0143
1803	C.6:16:25	Marble	Architectural Fragment		HAM74.0423
1804	C.7:26:38	Iron	Knife Point		HAM74.0144
1805	D.3:80:295	Bronze	Coin	Nabataean	DAJ
1806	A.9:30:46	Iron	Hook		HAM74.0145
1807	B.6:5:7	Iron	Blade		HAM74.0146
1808	A.9:30:46	Iron	Nail		HAM74.0147
1809	C.7:23:32	Iron	Hook		HAM74.0148
1810	C.7:23:32	Iron	Hook		HAM74.0149
1811	D.1:406:1	Bronze	Coin	Byzantine	DAJ
1812	B.7:1:Balk	Iron	Nail		HAM74.0150
1813	C.6:17:27	Amber	Bead		HAM74.0151
1814	C.6:16:29	Iron	Nail		HAM74.0152
1815	B.6:5:7	Iron	Nail		HAM74.0153
1816	A.9:28:54	Pumice	Rubbing Stone		HAM74.0154
1817	C.2:94:575	Chert	Slingstone		HAM74.0155
1818	G.6:13:20	Soapstone	Whetstone		HAM74.0156
1819	C.6:11:18	Bronze	Bangle Fragment		HAM74.0157
1820	C.6:13:19	Iron	Hook		HAM74.0158
1821	C.6:13:19	Iron	UD		HAM74.0159
1822	A.5:62:135	Alabaster?	Ring Stone?		HAM74.0160
1823	C.1:102:798	Ceramic	Lamp		HAM74.0161
1824	C.5:50:151	Iron	Buckle		HAM74.0162

1825	C.1:102:796	Ceramic	Lamp		HAM74.0163
1826	C.5:50:151	Glass	Bead		HAM74.0164
1827	B.4:205:373	Ivory	Inlay		HAM74.0165
1828	C.7:1:4	Bronze	UD		HAM74.0166
1829	A.9:21:35	Copper	Wire		HAM74.0167
1830	B.7:10:37	Iron	Nail		HAM74.0168
1831	D.3:81:300	Limestone	Weight		HAM74.0169
1832	G.5:18:25	Iron	Hook		HAM74.0170
1833	A.5:62E:136	Ceramic	Loom Weight		HAM74.0171
1834	A.5:62E:136	Ceramic	Loom Weight		HAM74.0172
1835	F.22:5:4	Bronze	Bangle Fragment		HAM74.0173
1836	D.2:21:254	Ceramic	Incised Sherd		HAM74.0174
1837	G.6:15:22	Iron	Knife Point		HAM74.0175
1838	C.1:102:786	Iron	Key? Fragment		HAM74.0176
1839	G.6:2:3	Iron	Nail Fragment		HAM74.0177
1840	C.5:50:152	Carnelian	Bead Fragment		HAM74.0178
1841	C.5:51:153	Bronze	Knife Hilt		HAM74.0179
1842	C.6:14:21	Iron	Ring		HAM74.0180
1843	D.1:65:286	Ceramic	Lamp	Hellenistic	DAJ
1844	B.3:89:145	Flint	Blade		HAM74.0181
1845	C.6:14:24	Iron	Tack		HAM74.0182
1846	C.3:59:284	Iron	Knife Point		HAM74.0183
1847	C.3:59:284	Iron	Knife Point		HAM74.0184
1848	D.3:80:295	Bronze	Kohl Stick		HAM74.0185
1849	D.3:80:295	Bronze	Cosmetic Spoon		HAM74.0186
1850	C.2:76:557	Stone	Worked Stone		—
1851	D.3:57D:269	Ceramic	Juglet	Roman	HAM74.0187
1852	D.3:57C:231	Ceramic	Juglet	Roman	HAM74.0188
1853	A.7:88:235	Ceramic	Bowl	Roman	HAM74.0189
1854	D.1N:88:440	Ceramic	Loom Weight		HAM74.0190
1855	D.3:57C:231	Ceramic	Cooking Pot	Roman	HAM74.0191
1856	B.7:10:29	Iron	Nail		HAM74.0192
1857	A.5:62E:136	Basalt	Vessel Fragment		HAM74.0193
1858	A.5:62D:135	Limestone	Mortar		HAM74.0194
1859	D.2:43:276	Glass	Bead		HAM74.0195
1860	C.6:16:29	Iron	Bar		HAM74.0196
1861	D.2:72:284	Shell	Pendant		HAM74.0197
1862	C.6:17:27	Faience	Bead		HAM74.0198
1863a-g	C.6:16:29	Glass	Beads		HAM74.0199
1864	D.2:43:273	Iron	Nail		HAM74.0200
1865	G.6:3:14	Bronze	Ring		HAM74.0201
1866	C.6:16:28	Sandstone	Architectural Fragment		HAM74.0202
1867	C.6:16:28	Iron	Hook		HAM74.0203
1868	C.6:16:25	Ceramic	Disc		HAM74.0204
1869	A.7:103:	Chert	Slingstone		HAM74.0205
1870	C.5:68:231	Glass	Bead		HAM74.0206
1871	C.5:68:231	Agate	Bead		HAM74.0207
1872	D.2:74:296	Glass	Bead		HAM74.0208
1873	D.2:74:296	Basalt	Pestle		HAM74.0209
1874	C.6:16:25	Iron	Mirror?		HAM74.0210
1875	D.2:76:304	Ceramic	Loom Weight		HAM74.0211
1876	D.2:76:304	Ceramic	Loom Weight		HAM74.0212
1877	D.2:73:302	Alabaster	Vessel		HAM74.0213
1878	D.2:73:291	Bronze	UD		HAM74.0214
1879	D.2:43:276	Lead	UD		HAM74.0215
1880	E.6::	Ceramic	Two-spouted Lamp	E. Roman	DAJ
1881	C.6:16:28	Chert	Slingstone		HAM74.0216
1882	C.5:68:231	Limestone	Pestle		HAM74.0217

1883	C.6:11:26	Pottery	Stand		HAM74.0218
1884	A.5:62F:139	Ceramic	Loom Weight Fragment		HAM74.0219
1885	D.3:82:314	Limestone	Vessel Fragment		HAM74.0220
1886	D.4:49:160	Plasater	Architectural Fragment		HAM74.0221
1887	C.6:16:30	Iron	Cosmetic Rod		HAM74.0222
1888	C.6:16:30	Bronze	Hairpin Fragment		DAJ
1889	C.6:20:35	Faience	Ring Stone		HAM74.0223
1890	C.5:70:233	Ceramic	Ostracon	Byzantine?	HAM74.0224
1891	D.5:42:	Bone	Weight ?		HAM74.0225
1892	C.7:2:58	Iron	Nail		HAM74.0226
1893	A.8:1:13	Iron	Chain Links		HAM74.0227
1894	C.6:20:34	Bronze	Sheet		HAM74.0228
1895	C.6:20:34	Iron	Nail		HAM74.0229
1896	C.6:20:34	Iron	Nail		HAM74.0230
1897	C.7:30:59	Basalt	Pestle		HAM74.0231
1898	C.6:20:34	Glass	Bead		HAM74.0232
1899	C.7:30:59	Bronze	Pin		HAM74.0233
1900	A.8:1:13	Iron	Bar Fragment		HAM74.0234
1901	G.6:18:28	Iron	Nail		HAM74.0235
1902	G.6:18:28	Bronze	Sheet		HAM74.0236
1903	D.3:86:324	Limestone	Vessel Fragment		HAM74.0237
1904	A.8:1:13	Limestone	Mortar Fragment		—
1905	G.6:18:28	Iron	Saw Fragment		HAM74.0238
1906	C.6:22:36	Bronze	Cosmetic Rod		HAM74.0239
1907	G.6:17:30	Bronze	Bead		HAM74.0240
1908	C.7:14:64	Bone	Spindle Fragment		HAM74.0241
1909	E.4:3:35	Shell	Bead		HAM74.0242
1910	D.2:73:334	Ivory	Needle		HAM74.0243
1911	A.9:36:72	Limestone	Architectural Fragment		—
1912	C.7:28:44	Lead/Bronze	Tile Clamp		HAM74.0244
1913	D.2:93:325	Bone	Amulet-Pendant		HAM74.0245
1914	D.2:93:325	Bone	Amulet-Pendant		DAJ
1915	D.2:93:325	Bone	Amulet-Pendant		HAM74.0246
1916	D.2:93:325	Bone	Amulet-Pendant		DAJ
1917	D.2:93:325	Stone	Amulet-Pendant		DAJ
1918	D.5:43:95	Tin	Strip		HAM74.0247
1919	D.2:92:324	Ceramic	Loom Weight		HAM74.0248
1920	D.4:59:168	Glass	Bottle	Islamic	DAJ
1921	C.6:18:37	Iron	Nail		HAM74.0249
1922	C.6:18:37	Iron	Bangle Fragment		HAM74.0250
1923	D.2:87:311	Iron	Knife Blade		HAM74.0251
1924	A.9:34:69	Silver	Coin	Mamluk	DAJ
1925	D.4:61:170	Iron	Plow Point		HAM74.0252
1926	D.2:95C:347	Faience	Bead		HAM74.0253
1927	D.5:43:96	Bronze	Cosmetic Rod		HAM74.0254
1928	C.7:36:74	Limestone	Spindle Whorl		HAM74.0255
1929	C.7:36:74	Limestone	Spindle Whorl Fragment		HAM74.0256
1930	—	Bone	Needle		HAM74.0257
1931	C.8:1:3	Iron	Ring		HAM74.0258
1932	B.2:123:285	Ceramic	Spindle Whorl		HAM74.0259
1933	C.7:8:13	Bone	Needle		HAM74.0260
1934	C.6:16:29	Ceramic	Inscribed Sherd	Islamic	DAJ
1935	D.2:72:284	Ceramic	Bowl	Roman	HAM74.0261
1936	G.6:18:28	Ceramic	Platter		HAM74.0262
1937	E.6:9:14	Ceramic	Cooking Pot	Roman	HAM74.0263
1938	A.5:62E:137	Ceramic	Cooking Pot	Hellenistic	HAM74.0264
1939	F.22:8:8	Iron	Knife Blade		HAM74.0265
1940	C.6:15:40	Iron	Disc		HAM74.0266

1941	C.6:15:40	Iron	Nail		HAM74.0267
1942	A.9:51:99	Iron	Hook		HAM74.0268
1943	C.6:15:40	Basalt	Rubbing Stone		HAM74.0269
1944	D.2:95, 96:347	Ceramic	Loom Weight		HAM74.0270
1945	A.5:62A:146	Ceramic	Loom Weight		HAM74.0271
1946	C.34:72	Bronze	Coin	Umayyad	DAJ
1947	C.6:15:40	Bronze	Coin	Nabataean	HAM74.0272
1948	A.5:62B:147	Ceramic	Loom Weight Fragment		HAM74.0273
1949	A.5:62A:146	Ceramic	Loom Weight Fragment		HAM74.0274
1950	A.5:62C:148	Ceramic	Loom Weight Fragment		HAM74.0275
1951	G.8:5:21	Flint	Blade		HAM74.0276
1952	D.3:91:331	Ivory	Needle Fragment		HAM74.0277
1953	G.9:2:3	Bronze	Bangle Fragment		HAM74.0278
1954	G.9:2:3	Iron	Nail		HAM74.0279
1955	G.9:2:3	Iron	Arrowhead		HAM74.0280
1956	A.8:24:22	Glass	Bead		HAM74.0281
1957	G.9:2:3	Quartz	Weight		HAM74.0282
1958	F.23:1:1	Iron	Hook		HAM74.0283
1959	D.2:77A:355	Ceramic	Loom Weight		HAM74.0284
1960	A.9:34:69	Silver	Coin	Mamluk	HAM74.0285
1961	A.5:62D:149	Ceramic	Loom Weight		HAM74.0286
1962	D.3:97A:326	Basalt	Vessel Fragment		—
1963	D.2:95C:343	Iron	Nail		HAM74.0287
1964	D.3:91:331	Limestone	Vessel Fragment		HAM74.0288
1965	D.2:77B:256	Basalt	Pestle		HAM74.0289
1966	C.6:18:39	Iron	Nail		HAM74.0290
1967	A.8:24:24	Glass	Bead		HAM74.0291
1968	B.4:222:458	Basalt	Pestle		HAM74.0292
1969	B.4:254:462	Chert	Slingstone		DAJ
1970	G.10:2:2	Gold	Earring		DAJ
1971	D.3:91:331	Limestone	Vessel Fragment		HAM74.0293
1972	B.4:228:431	Limestone	Mortar Fragment		HAM74.0424
1973	A.8:24:24	Iron	Nail		HAM74.0294
1974	A.9:65:121	Iron	Nail		HAM74.0295
1975	A.9:63:118	Iron	Nail		HAM74.0296
1976	C.6:43:23	Carnelian	Bead Fragment?		HAM74.0297
1977	D.4:61:179	Iron	Bangle		HAM74.0298
1978	D.4:64:178	Iron	Ring Fragment		HAM74.0299
1979	C.6:23:43	Iron	Ring		HAM74.0300
1980	D.2:77B:356	Ceramic	Loom Weight		HAM74.0301
1981	D.2:77B:356	Ceramic	Loom Weight		HAM74.0302
1982	D.2:77B:356	Ceramic	Loom Weight		HAM74.0303
1983	D.2:77B:356	Ceramic	Loom Weight		HAM74.0304
1984	D.2:77B:356	Ceramic	Loom Weight		HAM74.0305
1985	D.2:77B:356	Ceramic	Loom Weight		HAM74.0306
1986	D.2:77B:356	Ceramic	Loom Weight		HAM74.0307
1987	D.2:77B:356	Ceramic	Loom Weight		HAM74.0308
1988	D.2:77B:356	Ceramic	Loom Weight		HAM74.0309
1989	D.2:77B:356	Ceramic	Loom Weight		HAM74.0310
1990	D.2:77B:356	Ceramic	Loom Weight		DAJ
1991	D.2:77B:356	Ceramic	Loom Weight		DAJ
1992	D.2:77B:356	Ceramic	Loom Weight		HAM74.0311
1993	D.2:77B:356	Ceramic	Loom Weight		HAM74.0312
1994	D.3:69:212	Limestone	Mortar Fragment		—
1995	D.2:95B:339	Ceramic	Bowl		HAM74.0313
1996	D.3:91:331	Ceramic	Lamp	E. Roman	HAM74.0314
1997	E.6:9:18	Ceramic	Cooking Pot	E. Roman	HAM74.0315
1998	C.7:30:59	Limestone	Weight		HAM74.0316

1999	A.9:26:61	Iron	Fibula		HAM74.0317
2000	A.9:98:58	Bronze	Buckle		HAM74.0318
2001	B.2:62:274	Bone	Weaving-pattern Spatula		HAM74.0319
2002	C.5:59:178	Glass	Bead		DAJ
2003	C.6:11:26	Bronze	Cosmetic Rod		HAM74.0320
2004	A.9:54:119	Glass	Bead		HAM74.0321
2005	D.3:57E:256	Glass	Spindle Whorl		HAM74.0322
2006	C.3:61:292	Glass	Bead		DAJ
2007	D.4:40:99	Alabaster?	Ring Stone?		HAM74.0323
2008	A.9:34:69	Iron	Nail		HAM74.0324
2009	B.4:237:411	Bone	Amulet-Pendant		HAM74.0325
2010	D.2:73:373	Iron/Lead	Flogging Head ?		HAM74.0326
2011	D.1N:86:436	Ceramic	Spindle Whorl Fragment		HAM74.0327
2012	G.5:1:1	Chert	Slingstone		HAM74.0328
2013	G.5:1:1	Flint	Blade		HAM74.0329
2014	A.5:62E:112	Ceramic	Loom Weight		HAM74.0330
2015	A.5:62E:112	Ceramic	Loom Weight		HAM74.0331
2016	G.9:2:4	Bronze	Strip		HAM74.0332
2017	A.5:87A:160	Ceramic	Pipe Head		HAM74.0333
2018	F.23:2:	Glass	Bead		HAM74.0334
2019	A.5:87A:160	Ceramic	Loom Weight		HAM74.0335
2020	C.6:23:45	Bronze	Earring		HAM74.0336
2021	G.9:2:4	Iron	Hook		HAM74.0337
2022	A.5:87A:160	Ceramic	Loom Weight Fragment		HAM74.0338
2023	G.9:2:4	Iron	Arrowhead		HAM74.0339
2024	C.6:23:46	Faience	Bead		HAM74.0340
2025	C.7:41:82	Bone	Spindle Fragment		HAM74.0341
2026	G.9:3:5	Bronze	Cosmetic Rod		HAM74.0342
2027	A.5:87A:160	Ceramic	Loom Weight		HAM74.0343
2028	A.9:72:128	Bronze	Sheet		HAM74.0344
2029	A.9:72:128	Basalt	Rubbing Stone		HAM74.0345
2030	A.8:14:23	Ceramic	Horned Spout		DAJ
2031	A.9:19:25	Glass	Bead		HAM74.0346
2032	A.9:19:25	Glass	Bead		HAM74.0347
2033	C.3:61:295	Glass	Bead		HAM74.0348
2034	B.2:124:300	Bronze	Spindle Whorl		HAM74.0349
2035	C.6:23:47	Glass	Bead		HAM74.0350
2036	G.6:30:49	Bronze	Cosmetic Rod		HAM74.0351
2037	G.10:1:9	Faience	Bead		HAM74.0352
2038	B.4:264:470	Limestone	Weight		HAM74.0353
2039	G.9:3:7	Bronze	Coin	Byzantine	HAM74.0354
2040	G.10:8:10	Bronze	Fibula		DAJ
2041	A.8:22:30	Bone	Needle Case		HAM74.0355
2042	A.9:76:134	Bronze	Coin	Byzantine	HAM74.0356
2043	A.9:76:134	Bronze	Cosmetic Rod		HAM74.0357
2044	C.8:2:6	Pearl?	Bead		HAM74.0358
2045	C.8:2:6	Ceramic	Disc		HAM74.0359
2046	C.7:16:21	Serpentine	Spindle Whorl		HAM74.0360
2047	C.7:12:16	Ceramic	Lamp Fragment		HAM74.0361
2048	C.8:1:2	Ceramic	Lamp Fragment	Islamic	HAM74.0362
2049	D.2:73:299	Ceramic	Bowl	L. Roman	HAM74.0363
2050	D.3:93:340	Bronze	Coin	Hellenistic	DAJ
2051	D.2:95A:379	Ceramic	Loom Weight		HAM74.0364
2052	A.9:7:46	Iron	Ring		HAM74.0365
2053	C.1:105:804	Bronze	Arrowhead		HAM74.0366
2054	G.6:25:39	Bronze/Iron	Ring		HAM74.0367
2055	C.7:34:72	Bone	Needle		HAM74.0368
2056	G.8:10:35	Ceramic	Lamp	Roman	HAM74.0369

2057	D.4:62:187	Bronze	Coin	Umayyad	HAM74.0370
2058	G.5F:1:54	Bronze	Coin	Byzantine	HAM74.0371
2059	C.3:53:278	Bronze	Coin	Byzantine	HAM74.0372
2060	A.9:54:119	Glass	Seal	Islamic	DAJ
2061	C.8:3:7	Bronze	Coin	Ayyubid	HAM74.0373
2062	C.8:3:7	Bronze	Coin	Umayyad	HAM74.0374
2063	C.6:25:Balk	Bronze	Coin	Mamluk	HAM74.0375
2064	A.5:91:165	Ceramic	Loom Weight		HAM74.0376
2065	D.2:95D:379	Ceramic	Loom Weight		HAM74.0377
2066	A.9:81:143	Iron	Arrowhead		HAM74.0378
2067	B.7:14:62	Bronze	Fibula Bow		HAM74.0379
2068	C.6:25:49	Glass	Bead		HAM74.0380
2069a-e	G.10:19:24	Glass	Beads		HAM74.0381
2070	C.1:117:844	Ivory	Seal		HAM74.0382
2071	B.7:125:304	Bone	Weaving-pattern Spatula		HAM74.0383
2072	A.9:82:141	Bronze	Cosmetic Rod		HAM74.0384
2073	G.10:13:17	Glass	Bead		HAM74.0385
2074	D.2:95B:376	Iron	Hook		HAM74.0386
2075	C.6:25:49	Bronze	Bangle Fragment		HAM74.0387
2076	G.10:17:23	Serpentine	Spindle Whorl		HAM74.0388
2077	C.5:81:270	Shell	Conch Shell		HAM74.0389
2078	D.2:95B:376	Shell	Conch Shell		HAM74.0390
2079	A.9:87:150	Basalt	Upper Millstone		—
2080	G.10:19:24	Glass	Bottle		HAM74.0391
2081	A.9:87:150	Basalt	Upper Millstone		HAM74.0425
2082	G.10:16:20	Bone?	Spindle Fragment		HAM74.0392
2083	B.4:263:487	Ivory	Cosmetic Applicator		DAJ
2084	D.4:60:185	Ceramic	Jar Lid		DAJ
2085	C.7:39:91	Iron	Nail		HAM74.0393
2086	C.7:39:91	Bronze	Ring		HAM74.0394
2087	D.4:64:178	Bronze	Bead?		HAM74.0395
2088	G.10:19:26	Iron	Nail		HAM74.0396
2089	C.7:39:91	Basalt	Vessel Fragment		HAM74.0397
2090	C.8:12:12	Soapstone	Whetstone		HAM74.0398
2091	D.4:62:188	Ceramic	Spindle Whorl		HAM74.0399
2092	B.2:126:311	Ceramic	Ostracon	Iron 2/Persian	HAM74.0400
2093	B.4:263:463	Limestone	Rubbing Stone		HAM74.0401
2094	C.8:3:13	Ceramic	Lamp	Islamic	HAM74.0402
2095	B.4:249:472B	Ceramic	Rhodian Jar Handle	Hellenistic	DAJ
2096	D.4:62:187	Iron	Nail		HAM74.0403
2097	G.10:19:26	Ceramic	Lamp	E. Roman	HAM74.0404
2098	G.10:17:21	Ceramic	Lamp	E. Roman	HAM74.0405
2099	G.10:19:24	Ceramic	Lamp	E. Roman	HAM74.0406
2100	G.7:2:5	Ceramic	Jug	Islamic	HAM74.0407
2101	G.10:14:18	Bronze	Coin	Nabataean	HAM74.0408
2102	Survey, Site 108	Ceramic	Figurine	Iron 2	HAM74.0409
2103	B.4:205:376	Limestone	Bowl		HAM74.0410
2104	B.1:13:Balk	Bronze	Coin	Roman	HAM74.0411
2105	C.5:81:270	Bronze	Coin	Byzantine	HAM74.0412
2106	G.6:29:47	Glass	Seal Impression	Islamic	HAM74.0413
2107	A.5:62D:149	Ceramic	Loom Weight Fragments		HAM74.0417
2108	D.2:77A:355	Ceramic	Loom Weight Fragments		HAM74.0418
2109	D.2:77A:355	Ceramic	Loom Weight Fragments		HAM74.0419
2201	C.8.Surface	Basalt	Lower Millstone		—
2202	D.3:98:351	Ceramic	Lamp	E. Roman	HAM76.0027
2203	D.4:84:205	Bronze	Ring Fragment		HAM76.0028
2204	C.8:16 Cleanup:1	Glass	Bead		HAM76.0029
2205	C.1W:119:874	Bronze	Cosmetic Rod		HAM76.0030

2206	C.5W:85:272	Bronze	Ring		HAM76.0031
2207	C.5W:84:271	Bronze	Kohl Stick		HAM76.0032
2208	C.5W:84:271	Iron	Ring		HAM76.0033
2209	C.5W:84:271	Iron	Knife Blade		HAM76.0034
2210	D.4:84:205	Iron	Nail		HAM76.0035
2211	C.1W:119:874	Iron	Nail		HAM76.0036
2212	C.8:16:1	Bronze	Spoon		HAM76.0037
2213	C.5W:85:272	Sandstone	Weight?		HAM76.0038
2214	G.11:2:3	Quartz	Bead		HAM76.0039
2215	C.5W:84:274	Glass	Bead		HAM76.0040
2216	G.11:1:2	Glass	Bead		HAM76.0041
2217	C.1W:122:878	Glass	Bead		HAM76.0042
2218	C.1W:122:877	Limestone	Weight?		HAM76.0043
2219	G.11:1:2	Iron	Nail		HAM76.0044
2220a-d	C.5W:87:278	Glass/Bronze	Beads (3) & Chain		HAM76.0045
2221	G.4:10:1	Flint	Blade		HAM76.0046
2222	G.4:10:2	Bronze	Bangle		DAJ
2223	G.4:10:2	Iron	Hook		HAM76.0047
2224	F.27:1:1	Lead	Bullet	Modern?	HAM76.0048
2225	G.12:1:3	Lead	Bullet	Modern?	HAM76.0049
2226	G.12:1:3	Iron	Weight?		HAM76.0050
2227	B.7:18:68	Iron	Slag		HAM76.0051
2228	G.4:10:1	Bronze	Stirrup	Modern	HAM76.0052
2229	G.4:10:1	Iron	Key	Modern	HAM76.0053
2230	G.4:10:2	Plastic	Comb	Modern	HAM76.0054
2231	G.4:10:2	Iron	Horse Shoe	Modern	HAM76.0055
2232	G.4:10:2	Iron	Tool	Modern	HAM76.0056
2233	G.4:10:2	Ceramic	Pipe	Ottoman	HAM76.0057
2234	G.4:3:4	Glass	Bead		HAM76.0058
2235	A.8:14:40	Bronze	Bell		HAM76.0059
2236	G.4:11B:5	Stone	Pendant		DAJ
2237	A.11:2:5	Lead	Bullet	Modern?	HAM76.0060
2238	G.11:4:5	Flint	Blade		HAM76.0061
2239	B.7:18:73	Iron	Nail		HAM76.0062
2240	C.5W:89:283	Bronze	Kohl Stick		HAM76.0063
2241	B.7:19:76	Bone	Needle		HAM76.0064
2242	B.7:19:74	Ivory	Inlay		HAM76.0065
2243	F.27:5:6	Plastic	Button	Modern	HAM76.0066
2244	B.7:19:27	Ceramic	Spindle Whorl Fragment		HAM76.0067
2245	C.5W:84:274	Iron	Nail		HAM76.0068
2246	C.9E:1:3	Bronze	Hook		HAM76.0069
2247	C.8E:17:19	Bronze	Ring		HAM76.0070
2248	G.11:3:4	Iron	Nail		HAM76.0071
2249a-d	A.11:6:4	Iron	Nails		HAM76.0072
2250	C.6:24:55	Iron	Buckle		—
2251	C.6:24:55	Bronze	Earring Fragment		HAM76.0073
2252	C.6:24:55	Iron	Knife Blade		HAM76.0074
2253	G.12:1:5	Bronze/Iron	Cartridge, Hook & UDs		HAM76.0075
2254	D.2:80B:396	Limestone	Vessel Fragment		HAM76.0076
2255	F.27:6:7	Glass	Bangle Fragment		HAM76.0077
2256	C.5W:87:280	Bone	Bead		HAM76.0078
2257	C.1W:123:882	Steatite	Bead		HAM76.0079
2258ab	C.5W:89:286	Glass	Bead		HAM76.0080
2259	Survey, Site 130	Ceramic	Incised Sherd		HAM76.0081
2260	C.1W:122:877	Ceramic	Spindle Whorl		HAM76.0082
2261	C.1W:123:883	Ceramic	Spindle Whorl Fragment		HAM76.0083
2262	C.10:1:4	Glass	Bangle Fragment		HAM76.0084
2263	C.9:1:4	Iron	Clamp		HAM76.0085

2264	C.6:24:57	Iron	Nail		HAM76.0086
2265	B.7:19:74	Iron	Nail		HAM76.0087
2266	G.11:6:8	Iron	Nail		HAM76.0088
2267	F.30:2:2	Iron	Tack		HAM76.0089
2268	C.5W:87:282	Iron	Plow Point		HAM76.0090
2269	G.11:6:8	Iron	Hook		HAM76.0091
2270ab	C.5W:89:285	Iron	Cosmetic Rods		HAM76.0092
2271	D.3:16:361	Limestone	Mortar Fragment		—
2272	D.2:8OB:395	Ceramic	Bowl		HAM76.0093
2273	D.2:8OA:394	Ceramic	Bowl		HAM76.0094
2274	C.8:11:42	Iron	Arrowhead		HAM76.0095
2275	B.2:133:321	Ivory	Inlay		HAM76.0096
2276	C.5W:94:294	Glass	Bead		HAM76.0097
2277	G.4:11B:6	Glass	Tessera		HAM76.0098
2278	A.8:30:44	Glass	Bead		HAM76.0099
2279	G.4:11B:9	Limestone	Tesserae		HAM76.0100
2280	C.6:34:59	Limestone	Weight		HAM76.0101
2281	C.6E:24:57	Sandstone	Worked Stone Fragment		HAM76.0102
2282	G.4:15:10	Marble	Architectural Fragment		HAM76.0103
2283	C.8:19:27	Shell	Shell Fragment		HAM76.0104
2284	B.4:283A:500	Glass	Jar Fragment		DAJ
2285	C.1W:121:880	Marble	Architectural Fragment		HAM76.0105
2286	C.8:11:20	Bronze	Ring		HAM76.0106
2287	A.11:17:26	Bronze	Ring		HAM76.0107
2288	A.8:30:44	Bronze	Ring		HAM76.0108
2289	A.9:101:171	Iron	Plow Point		HAM76.0109
2290	C.8E:18:26	Iron	Hook		HAM76.0110
2291	C.5W:91:297	Iron	Cosmetic Rod		HAM76.0111
2292	C.5W:93:291	Iron	Wire		HAM76.0112
2293	C.5W:93:291	Iron	Nail		HAM76.0113
2294	G.4:13:7	Iron	Bar		HAM76.0114
2295	B.7:19:79	Ivory	Sculpture Fragment		DAJ
2296	B.4:283A:500	Ceramic	Bowl	Mamluk	DAJ
2297	B.4:283A:500	Ceramic	Bowl	Mamluk	DAJ
2298	A.11:4:8	Ceramic	Bowl		HAM76.0115
2299	A.11:4:8	Ceramic	Lamp	E. Islamic	HAM76.0116
2300	C.8:18N:30	Limestone	Weight		HAM76.0117
2301	D.4:89:214	Pseudo-Jet	Button		HAM76.0118
2302	C.9:5:11	Lead	Bullet	Modern?	HAM76.0119
2303	C.9:5:11	Bronze	Cosmetic Rod		HAM76.0120
2304	A.11:12:22	Iron	Nail		HAM76.0121
2305	C.8:22:31	Iron	Tack		HAM76.0122
2306	C.1:124:885	Limestone	Weight		HAM76.0123
2307	C.8:18:29	Iron	Nails		HAM76.0124
2308	A.11:4:18	Ceramic	Bowl	Mamluk	DAJ
2309	B.2:135:330	Basalt	Vessel Fragment		HAM76.0125
2310	C.1W:123:882	Ceramic	Spindle Rest		HAM76.0126
2311	B.4:283A:501	Bronze	Cosmetic Rod		HAM76.0127
2312	C.5W:93:293	Pumice	Rubbing Stone		HAM76.0128
2313	B.7:19:78	Ceramic	Bowl Fragment	Iron 1/2	HAM76.0129
2314	C.6E:28:64	Glass	Bead		HAM76.0130
2315	G.11:3:4	Bronze	Coin	Byzantine	HAM76.0131
2316	A.10:4:9	Bronze	Cosmetic Spoon		DAJ
2317	D.4:69:210	Bronze	Coin	Nabataean	HAM76.0132
2318	C.8:19:27	Bronze	Coin	Hellenistic?	DAJ
2319	C.7W:47:96	Bronze	Coin	L. Roman	HAM76.0133
2320	G.11:11:11	Glass	Bangle Fragment		HAM76.0134
2321	B.7:21:80	Iron	Slag		HAM76.0135

2322	B.7:19:76	Basalt	Muller		—
2323	C.9:1:5	Limestone	Mortar		—
2324	G.11:Balk Trim	Basalt	Muller		—
2325	C.6:28:64	Limestone	Door Socket		—
2326	C.6:28:64	Limestone	Door Socket		—
2327	C.7W7:49:101	Iron	Nail		HAM76.0136
2328	C.5W:98:304	Flint	Blade		HAM76.0137
2329	C.5W:98:304	Iron	Nail		HAM76.0138
2330	C.5W:98:304	Sandstone	Worked Stone		HAM76.0139
2331	C.6:28:64	Glass	Ring Fragment		HAM76.0140
2332	C.6:40:65	Iron	Knife Blade Fragment		HAM76.0141
2333	C.6:28:63	Iron	Knife Blade Fragment		HAM76.0142
2334	C.7:47:99	Bronze	Kohl Stick		HAM76.0143
2335	C.6:41:66	Iron	Nail		HAM76.0144
2336	C.6:41:66	Iron	Hook		HAM76.0145
2337	C.5:94:298	Bronze	Kohl Stick		DAJ
2338	C.5:94:298	Flint	Blade		HAM76.0146
2339	C.5:94:298	Ivory	Ring		HAM76.0147
2340	C.5:94:298	Flint	Blade		HAM76.0148
2341	C.5:94:298	Iron	Nail		HAM76.0149
2342	C.5:94:298	Iron	Bangle		HAM76.0150
2343	F.27:7:10	Ivory	Cosmetic Applicator		DAJ
2344ab	F.27:7:10	Bone	Spindle & Whorl		HAM76.0151
2345	F.27:7:10	Ivory?	Needle		HAM76.0152
2346ab	F.27:7:10	Bronze	Button & Bangle		HAM76.0153
2347	C.5:93:293	Stone	UD		HAM76.0154
2348	C.1:119:874	Bronze	Coin	Nabataean	DAJ
2349	F.27:6:8	Silver?	Garment Attachment		HAM76.0155
2350	G.11:1:1	Bronze	Coin	Ayyubid	DAJ
2351	D.4:94:222	Glass	Spindle Whorl		HAM76.0156
2352	F.27:7:10	Bone	Spindle Fragment		HAM76.0157
2353	C.5:21A:72	Iron	Nail		HAM76.0158
2354	C.5:101:312	Flint	Blade		HAM76.0159
2355	A.11:29:27	Flint	Blade		HAM76.0160
2356	C.8:18:30	Iron	Hinge Fragment		HAM76.0161
2357	G.11:7:9	Glass	Bead		HAM76.0162
2358	A.8:14:47	Plaster	Knob		HAM76.0163
2359	G.4:17:16	Limestone	Disc		HAM76.0164
2360	A.11:32:30	Iron	Nail		HAM76.0165
2361	C.5:94:298	Glass	Bangle Fragments		HAM76.0166
2362	C.6:44:71	Bronze	Ring		HAM76.0167
2363	C.8:22:32	Glass	Bead		HAM76.0168
2364	C.8:22:32	Iron	Nail		HAM76.0169
2365	C.8:22:32	Iron	Hook		HAM76.0170
2366	C.6:4:67	Chert	Slingstone		HAM76.0171
2367	C.5:99:310	Iron	Spear Point		HAM76.0172
2368	G.11:14:15	Glass	Bottle		HAM76.0173
2369	C.5:97:307	Basalt	Pestle		HAM76.0174
2370	D.4:85:218	Basalt	Vessel Fragment		HAM76.0175
2371	D.4:85:218	Iron	Hook		HAM76.0176
2372	C.5:99:309	Iron	Nail		HAM76.0177
2373	C.5:99:309	Bronze	Molding		HAM76.0685
2374	C.5:99:309	Flint	Blade		HAM76.0178
2375	C.6:29:67	Basalt	Lower Millstone		HAM76.0179
2376	C.6:37:70	Limestone	Door Socket		—
2377	D.4:94:229	Ivory	Needle Fragment		HAM76.0180
2378	D.2:80E:405	Ceramic	Lamp	Hellenistic	HAM76.0181
2379	C.8:18:30	Ceramic	Lamp	E. Islamic	DAJ

2380	B.7:19:76	Ceramic	Disc		DAJ
2381	C.5:92:299	Ceramic	Juglet		HAM76.0182
2382	C.5:101:313	Coral	Bead		HAM76.0183
2383	C.5:101:313	Steatite	Whetstone Pendant		HAM76.0184
2384	C.5:101:313	Bronze	Kohl Stick Fragment		HAM76.0185
2385	C.1:123:893	Bronze	Ring		HAM76.0186
2386	C.6:21A:74	Chert	Slingstone		HAM76.0187
2387	C.5:104:319	Glass	Bead		HAM76.0188
2388	C.5:104:319	Bronze	Measuring Cup		DAJ
2389	B.4:283C:507	Bronze	Rivet		HAM76.0189
2390	F.27:8:12	Glass	Bottle		HAM76.0190
2391	C.5:101:313	Glass	Bangle Fragments		HAM76.0191
2392	B.7:19:84	Ivory	Inlay		HAM76.0192
2393	C.6:2:76	Iron	Saw Blade		HAM76.0193
2394	B.7:19:85	Iron	Knife Blade		HAM76.0194
2395	F.27:8:12	Bronze	Bangle		HAM76.0195
2396	F.27:8:12	Bronze	Bangle		HAM76.0196
2397	A.11:36:34	Basalt	Muller		—
2398	A.11:35:32	Sandstone	Muller		HAM76.0197
2399	C.1:123B:886	Ceramic	Spindle Rest		HAM76.0198
2400	C.1:123B:886	Ceramic	Spindle Whorl Fragment		HAM76.0199
2401	C.1:125:888	Ceramic	Spindle Whorl Fragment		HAM76.0200
2402	C.1:123B:886	Ceramic	Spindle Whorl Fragment		HAM76.0201
2403	C.1:123B:886	Ceramic	Spindle Whorl Fragment		HAM76.0202
2404	C.1:123B:886	Ceramic	Spindle Whorl Fragment		HAM76.0203
2405	C.1:123B:886	Ceramic	Spindle Whorl		HAM76.0204
2406	C.5:98:304	Ceramic	Pendant		HAM76.0205
2407	C.8:11:42	Limestone	Strainer		HAM76.0206
2408	F.28:15:22	Glass	Vessel		HAM76.0207
2409	F.31:8:14	Glass	Vessel		HAM76.0208
2410	B.7:24:91	Basalt	Pestle		HAM76.0209
2411	F.31:8:14, 20	Alabaster	Bowl		DAJ
2412	F.27:7:10	Ceramic	Lamp	Byzantine	HAM76.0210
2413	C.6:45:82	Glass	Bowl		HAM76.0211
2414	A.10:4:8	Ceramic	Figurine	Mamluk	DAJ
2415	F.28:11:15	Limestone	Gaming Piece		HAM76.0212
2416	C.6:2:77	Iron	Nail		HAM76.0213
2417	C.6:2:77	Bronze	Bangle		DAJ
2418	—	Bronze	Earring		HAM76.0214
2419	C.1:124:896	Limestone	Weight?		HAM76.0215
2420	C.6:2:79	Iron	Nail		HAM76.0216
2421	C.5:103:323	Bronze	Cosmetic Rod		HAM76.0217
2422	C.5:103:323	Glass	Bead		HAM76.0218
2423	C.7:51:112	Schist	Vessel Fragment		HAM76.0219
2424	F.28:15:22	Bronze	Brooch		HAM76.0220
2425	F.30:3:8	Iron	Bangle Fragment		HAM76.0221
2426	F.30:3:8	Iron	Bangle Fragment		HAM76.0222
2427	F.30:3:8	Iron	Bangle Fragments		HAM76.0223
2428	C.1:126:897	Carnelian	Bead Fragment		HAM76.0224
2429	C.8:25:38	Ceramic	Jug	Mamluk	HAM76.0225
2430	C.6:2:77	Ceramic	Spindle Whorl		HAM76.0226
2431	C.1:124:896	Ceramic	Spindle Whorl Fragment		HAM76.0227
2432	C.1:124:889	Ceramic	Spindle Whorl Fragment		HAM76.0228
2433	C.1:124:889	Ceramic	Spindle Whorl Fragment		HAM76.0229
2434	C.1:124:889	Ceramic	Spindle Whorl Fragment		HAM76.0230
2435	C.1:124:889	Ceramic	Spindle Whorl		HAM76.0231
2436	C.1:125:892	Ceramic	Spindle Whorl Fragment		HAM76.0232
2437	C.1:124:889	Ceramic	Disc		HAM76.0233

2438	F.30:3:7	Iron	Tack		HAM76.0234
2439	C.1:123B:899	Limestone	Weight?		HAM76.0235
2440	C.1:123:898	Obsidian	Bead		HAM76.0236
2441	A.10:4:7	Glass	Bead		HAM76.0237
2442	C.6:2:77	Basalt	Rubbing Stone		HAM76.0238
2443	D.4:99:240	Basalt	Bowl Fragment		—
2444	D.4:99:239	Hematite	Pestle		HAM76.0239
2445	C.1:124:899	Limestone	Socket Fragment		—
2446	C.10:4:16	Limestone	Altar		HAM76.0240
2447	F.30:3:9	Bronze	Bangle		HAM76.0241
2448ab	F.30:3:9	Glass	Bead		HAM76.0242
2449	F.30:3:9	Bronze	Earring		HAM76.0243
2450	F.30:3:9	Bronze	Earring		HAM76.0244
2451	F.30:3:9	Shell	Pendant		HAM76.0245
2452	C.1:126:905	Stone	Seal	Iron 1	DAJ
2453	C.6:45:83	Bronze	Inscribed Ring	Islamic	DAJ
2454	D.2:80D:399	Ceramic	Spindle Whorl Fragment		HAM76.0246
2455	F.31:9:16	Glass	Bead		HAM76.0247
2456	F.34:1:1	Iron	Arrowhead		HAM76.0248
2457	F.27:8:13	Silver	Earring		HAM76.0249
2458a-e	A.10:11:18	Ceramic	Weights		HAM76.0250
2459	C.1:126:908	Limestone	Seal		HAM76.0251
2460	G.11:16:19	Iron	Shoe Sole Attachment	Modern	HAM76.0252
2461	F.27:8:13?	Bronze	Bangle		HAM76.0253
2462	G.11:18:21	Iron	Nail		HAM76.0254
2463	C.8:11:43	Iron	Nail		HAM76.0255
2464	C.8:11:43	Iron	Cosmetic Spoon		HAM76.0256
2465	C.5:113:346	Bronze	Ring		HAM76.0257
2466	C.5:113:346	Ivory	Cosmetic Applicator?		HAM76.0258
2467	C.5:113:346	Bronze	Sheet		HAM76.0259
2468	B.7:19:81	Bronze	Coin	Byzantine	HAM76.0260
2469	C.6:45:83	Bronze	Coin	Mamluk	HAM76.0261
2470	D.4:99:240	Bronze	Coin	Roman	HAM76.0262
2471	C.8:18:30	Bronze	Coin	Mamluk	DAJ
2472	C.6:45:82	Bronze	Coin	Ayyubid	HAM76.0263
2473	G.11:11:11	Bronze	Coin	Hellenistic	HAM76.0264
2474	C.9:3:24	Bronze	Coin	Nabataean	HAM76.0265
2475	C.6:4:67	Bronze	Coin	Umayyad	HAM76.0266
2476	C.8:11:43	Bronze	Coin	L. Roman	HAM76.0267
2477	D.3:108:368	Bronze	Coin	Hellenistic	DAJ
2478	C.10:4:14	Bronze	Coin	Byzantine	HAM76.0268
2479	D.4:99?:	Copper	Coin	L. Roman	HAM76.0269
2480	D.4:92:219	Bronze	Coin	Maccabean	HAM76.0270
2481	C.1:123:900	Ceramic	Spindle Whorl Fragment		HAM76.0271
2482	C.1:124:901	Ceramic	Spindle Whorl Fragment		HAM76.0272
2483	C.1:123:900	Ceramic	Spindle Whorl Fragment		HAM76.0273
2484	C.1:127:903	Ceramic	Spindle Whorl Fragment		HAM76.0274
2485	C.9:3:24	Ceramic	Flask		HAM76.0275
2486	D.4:108:246	Carnelian	Bead		HAM76.0276
2487	C.9:10:27	Glass	Bead		HAM76.0277
2488	C.6:48:89	Glass	Bead		HAM76.0278
2489	F.31:11:21	Crystal	Amulet		DAJ
2490	F.31:9:16	Silver	Pendant		HAM76.0279
2491	F.27:9:17	Bronze	Cosmetic Spoon		DAJ
2492	F.27:9:17	Hematite	Spindle Whorl		HAM76.0280
2493	G.11:19B:23	Bone	Spindle Whorl Fragment		HAM76.0281
2494	F.31:8:20	Bone	Spindle Whorl Fragment		HAM76.0282
2495	F.31:8:20	Bone	Cosmetic Applicator?		HAM76.0283

2496	F.27:9:17	Bronze	Bangle		HAM76.0284
2497	C.9:10:27	Iron	Nail		HAM76.0285
2498	C.6:2:87	Iron	Nail		HAM76.0286
2499	A.10:4:6	Iron	Nail		HAM76.0287
2500	G.12:6:24	Ceramic	Rhodian Jar Handle Fragment	Hellenistic	HAM76.0288
2501	C.1:126:905	Ceramic	Spindle Whorl Fragment		HAM76.0289
2502	B.7:27:101	Faience	Bead		HAM76.0290
2503	D.4:106:244	Glass	Bead		HAM76.0291
2504	A.10:13:19	Limestone	Die		HAM76.0292
2505	F.31:8:20	Hematite	Spindle Whorl		HAM76.0293
2506	C.8:22:35	Ceramic	Pendant		HAM76.0294
2507	D.4:99:239	Ceramic	Loom Weight		DAJ
2508	D.4:99:239	Ceramic	Loom Weight		DAJ
2509	D.4:99:239	Ceramic	Loom Weight		DAJ
2510	D.4:99:239	Ceramic	Loom Weight Fragment		HAM76.0295
2511	C.1:126:905	Ceramic	Spindle Whorl Fragment		HAM76.0296
2512	C.1:124:899	Ceramic	Spindle Whorl Fragment		HAM76.0297
2513	C.1:127:906	Ceramic	Spindle Whorl Fragment		HAM76.0298
2514	G.12:3:31	Iron	Dagger Blade		HAM76.0299
2515	F.31:8:22	Serpentine	Spindle Whorl		HAM76.0300
2516	F.31:8:22	Bronze	Ring		HAM76.0301
2517	C.6:54:96	Glass?	Bead		HAM76.0302
2518	C.8:26:46	Iron	Nail		HAM76.0303
2519	C.5:134:367	Stone	Slingstone?		HAM76.0304
2520	C.10:12:30	Iron	Nail		HAM76.0305
2521	C.5:134:364	Iron	Nail		HAM76.0306
2522	C.5:134:364	Iron	Hook		HAM76.0307
2523	A.8:14 S:43	Iron	Hook		HAM76.0308
2524	C.5:134:366	Iron	Blade		HAM76.0309
2525	F.31:8:25	Steatite	Scarab	LB 2/Iron 1	DAJ
2526	C.5:134:359	Bronze	Kohl Stick		HAM76.0310
2527	C.5:134:359	Ceramic	Weight		HAM76.0311
2528	C.5:134:359	Limestone	Weight		HAM76.0312
2529	C.5:132:358	Limestone	Weight		HAM76.0313
2530	C.5:132:358	Glass	Bangle Fragment		HAM76.0314
2531	B.2:135:328	Ceramic	Juglet		HAM76.0315
2532	C.8:11:44	Iron	Slag		HAM76.0316
2533	F.34:2:2	Bronze	Bullet Cartridge	Modern	HAM76.0317
2534	G.11:19B:23	Ceramic	Lamp		HAM76.0318
2535	F.31:8:25	Bronze	Ring		HAM76.0319
2536	F.31:8:25	Serpentine	Spindle Whorl		HAM76.0320
2537	F.31:8:25	Bone?	Spindle Whorl		HAM76.0321
2538	F.30:3:12	Iron	Ring		HAM76.0322
2539	F.31:8:25	Silver	Bangle		HAM76.0323
2540	F.31:8:20	Ceramic	Juglet	Islamic	DAJ
2541	D.4:107:255	Ceramic	Loom Weight		HAM76.0324
2542	D.4:107:255	Ceramic	Loom Weight		HAM76.0325
2543	A.6:1:4	Limestone	Weight?		HAM76.0326
2544	C.5:134:374	Limestone	Worked Stone Fragment		HAM76.0327
2545	A.6:1:2	Limestone	Worked Stone Fragment		—
2546	F.31:8:25	Bronze	Cosmetic Rod		HAM76.0328
2547	C.5:113:348	Bronze	Kohl Stick		HAM76.0329
2548	B.7:27:109	Iron	Hook Fragments		HAM76.0330
2549	F.31:8:25	Iron	Bangle Fragments		HAM76.0331
2550	F.30:3:12	Iron	Bangle Fragments		HAM76.0332
2551	C.7:62:129	Limestone	Worked Stone Fragment		—
2552	F.31:14:28	Bronze	Fibula		HAM76.0333
2553	F.31:8:22	Ceramic	Lamp	E. Roman	DAJ

2554	F.27:13:24	Gold	Earring		DAJ
2555	F.31:8:14	Ceramic	Cooking Pot	E. Roman	DAJ
2556	C.6:58:101	Glass	Bead		HAM76.0334
2557ab	F.27:13:24	Bone	Spindle Fragments		HAM76.0335
2558	D.4:107:260	Ceramic	Loom Weight		HAM76.0336
2559	D.4:107:260	Ceramic	Loom Weight		HAM76.0337
2560	F.27:13:24	Bone	Needle		HAM76.0338
2561	C.7:61:127	Bronze	Ring		HAM76.0339
2562	F.27:13:24	Iron	Bangle Fragments		HAM76.0340
2563	C.6:58:101	Iron	Pipe		HAM76.0341
2564	D.4:107:260	Iron	Hook		HAM76.0342
2565	C.7:57:126	Iron	Nail		HAM76.0343
2566	F.30:3:13	Iron	Fish Hook		HAM76.0344
2567	C.5:149:390	Bronze	Bangle Fragments		HAM76.0345
2568	F.27:13:24	Flint	Blade		HAM76.0346
2569	D.4:107:255	Basalt	Muller		—
2570	D.4:107:256	Basalt	Muller		—
2571	C.8:26:48	Basalt	Vessel Fragment		HAM76.0347
2572	C.8:26:48	Ceramic	Disc		HAM76.0348
2573	C.1:129:916	Ceramic	Spindle Whorl Fragment		HAM76.0349
2574	C.1:126:908	Ceramic	Spindle Whorl Fragment		HAM76.0350
2575	C.1:126:918	Ceramic	Spindle Whorl Fragment		HAM76.0351
2576	C.1:131:920	Ceramic	Spindle Whorl Fragment		HAM76.0352
2577	C.1:131:920	Ceramic	Spindle Whorl Fragment		HAM76.0353
2578	C.5:113:348	Ceramic	Disc		HAM76.0354
2579	C.5:113:348	Ceramic	Disc		HAM76.0355
2580	C.9:34:10	Ceramic	Roof Tile		HAM76.0356
2581	B.2:137:337	Ceramic	Figurine Head	Iron 2/Persian	HAM76.0357
2582	F.35:1:3	Ceramic	Incised Sherd		HAM76.0358
2583	D.4:118A:265	Ceramic	Loom Weight		HAM76.0359
2584	F.28:23:34	Glass	Bead		HAM76.0360
2585	A.10:13:21	Ceramic	Weight		HAM76.0361
2586	C.9:14:38	Limestone	Weight		HAM76.0362
2587	G.4:22:26	Bronze	Coin	Ayyubid	HAM76.0363
2588	C.5:134:366	Bronze	Coin	Ayyubid	HAM76.0364
2589	G.11:25A:35	Bronze	Coin	Byzantine	HAM76.0365
2590	C.9:34:10	Silver	Coin	Abbasid	DAJ
2591	A.10:4:12	Bronze	Coin	Roman	DAJ
2592	F.31:11:21	Bronze	Coin	Umayyad	HAM76.0366
2593	Survey, Site 26	Ceramic	Figurine	Iron	HAM76.0367
2594	Survey, Site 26	Ceramic	Figurine	Iron 2	HAM76.0368
2595	G.14:2:2	Bronze	Earring		HAM76.0369
2596	C.1:132:923	Limestone	Muller		HAM76.0370
2597	A.10:4:10	Schist	Worked Stone Fragment		HAM76.0371
2598	B.4:118A:265	Iron	Hook		HAM76.0372
2599	C.5:97:307	Ceramic	Cooking Pot		HAM76.0373
2600	G.4:86:109	Bone	Hairpin		HAM76.0374
2601	F.34:4 A:7	Iron	Bangle		HAM76.0375
2602	G.13:4:11	Faience	Bead		HAM76.0376
2603	C.8:9:55	Amber	Bead		HAM76.0377
2604	G.13:4:10	Iron	Hook		HAM76.0378
2605	F.27:13:31	Iron	Nail		HAM76.0379
2606	D.4:119:267	Ceramic	Loom Weight		HAM76.0380
2607	G.13:4:10	Bronze	Vessel Lid		HAM76.0381
2608	A.10:4:11	Basalt	Pestle		HAM76.0382
2609	C.8:31:53	Silver	Ring		HAM76.0383
2610	D.4:119:267	Chert	Slingstone		HAM76.0384
2611	D.4:119:267	Chert	Slingstone		HAM76.0385

2612	G.13:16:13	Glass	Lamp Base		HAM76.0386
2613	G.13:16:13	Faience	Bead		HAM76.0387
2614	G.13:16:13	Glass	Bead		HAM76.0388
2615	C.8:9:56	Bone	Spindle Whorl		HAM76.0389
2616	G.14:8:9	Bronze	Ring		HAM76.0390
2617	G.4:43:50	Iron	Ring		HAM76.0391
2618	G.13:16:14	Bone	Inlay		HAM76.0392
2619	C.5:149:391	Bone	Comb		HAM76.0393
2620	G.13:16:13	Bronze	Ring		DAJ
2621	D.4:120:269	Ceramic	Loom Weight		HAM76.0394
2622	C.8:9:56	Iron	Disc		HAM76.0395
2623	F.37:1:1	Iron	Lock Fragment		HAM76.0396
2624	G.13:16:13	Iron	Key		HAM76.0397
2625	D.4:121:271	Chert	Slingstone		HAM76.0398
2626	C.7:68:140	Limestone	Vessel Fragment		HAM76.0399
2627	C.7:67:139	Basalt	Rubbing Stone		HAM76.0400
2628	F.37:1:1	Basalt	Lower Millstone		—
2629	C.9:14:49	Agate	Bead		HAM76.0401
2630	F.38:2:3	Crystal	Ring Stone		HAM76.0402
2631	F.38:2:3	Agate	Bead		HAM76.0403
2632	F.38:2:3	Pseudo-Jet	Button		HAM76.0404
2633	G.16:2:3	Limestone	Weight		HAM76.0405
2634	B.7:22:132	Chert	Slingstone		HAM76.0406
2635	F.27:22:42	Flint	Scraper		HAM76.0407
2636	C.4:49:56	Bronze	Ring Fragment		HAM76.0408
2637	G.15:1:3	Iron	Nail		HAM76.0409
2638	F.31:10:39	Iron	Needle		HAM76.0410
2639	F.38:2:3	Iron	Ring		HAM76.0411
2640	C.9:11:47	Iron	Sheet		HAM76.0412
2641	G.11:25B:37	Ceramic	Cooking Pot	Roman	HAM76.0413
2642	F.34:4B:8	Ceramic	Lamp Fragment	Mamluk	HAM76.0414
2643	Survey, Site 26	Ceramic	Figurine Head	Iron 2	HAM76.0415
2644	Survey, Site 26	Ceramic	Figurine Head	Iron 2	HAM76.0416
2645	F.30:3:8	Glass	Bead		HAM76.0417
2646	C.5:167:423	Ivory	Haipin		HAM76.0418
2647	C.9:14:42	Bronze	Ring		HAM76.0419
2648	C.8:25:64	Bronze	Cosmetic Rod		HAM76.0420
2649	B.7:35:123	Ivory	Needle		HAM76.0421
2650	C.5:174:432	Bone	Handle		DAJ
2651	F.27:8:13	Bone	Cosmetic Applicator		DAJ
2652	C.1:133:935	Limestone	Weight		HAM76.0422
2653	C.6:67:125	Ivory	Die		DAJ
2654	G.15:1:7	Ivory	Spindle		DAJ
2655	C.6:43:122	Bronze	Cosmetic Rod		HAM76.0423
2656	F.28:30:47	Iron	Nail		HAM76.0424
2657	G.4:51:65	Iron	Ring		HAM76.0425
2658	G.4:54:68	Iron	Hook		HAM76.0426
2659	C.5:177:441	Chert	Slingstone		HAM76.0427
2660	C.1:133:939	Ceramic	Spindle Whorl		DAJ
2661	C.5:176:438	Basalt	Vessel Fragment		—
2662	D.4:101:258	Bronze	Coin	Maccabean	HAM76.0428
2663	D.4:107:256	Bronze	Coin	Nabataean	HAM76.0429
2664	C.9:14:40	Bronze	Coin	Mamluk	HAM76.0430
2665	F.31:13:31	Bronze	Coin	Byzantine	HAM76.0431
2666	F.34:4D:11	Bronze	Coin	Byzantine	HAM76.0432
2667	C.8:13:57	Bronze	Coin	L. Roman	HAM76.0433
2668	C.9:14:46	Bronze	Coin	Roman	DAJ
2669	B.7:35:122	Bronze	Coin	Nabataean	HAM76.0434

2670	A.11:11:71	Bronze	Coin	Mamluk	HAM76.0435
2671	G.14:8:15	Bronze	Coin	Maccabean	DAJ
2672	C.6:66:119	Bronze	Coin	L. Roman	DAJ
2673	C.9:14:53	Bronze	Coin	Mamluk	HAM76.0436
2674	G.15:1:7	Bronze	Coin	Hellenistic	DAJ
2675	F.34:4 B:14	Bronze	Coin	Mamluk	HAM76.0437
2676	C.6:72:126	Bronze	Coin	Byzantine	HAM76.0438
2677	C.8:25:67	Amethyst	Bead		HAM76.0439
2678	C.10:29:62	Carnelian	Bead		HAM76.0440
2679	G.14:13:24	Bronze	Bangle		HAM76.0441
2680	F.27:23:46	Iron	Bangle Fragment		HAM76.0442
2681	C.8:13:66	Iron	Nail		HAM76.0443
2682	C.8:28:69	Iron	Nail		HAM76.0444
2683	F.27:23:46	Bone	Hairpin		HAM76.0445
2684	F.27:23:46	Agate	Bead		HAM76.0446
2685ab	F.27:23:46	Glass	Bead		HAM76.0447
2686	G.14:8:22	Bronze	Earring		HAM76.0448
2687	C.6:76:135	Glass	Bead		HAM76.0449
2688	G.14:17:31	Quartz	Bead		HAM76.0450
2689	F.38:2:8	Ceramic	Bead		HAM76.0451
2690	F.27:24:47	Bone	Spindle		HAM76.0452
2691	F.27:23:46	Bone	Cosmetic Applicator Fragments		HAM76.0453
2692	F.27:25:49	Bronze	Lock Hook		HAM76.0454
2693	F.27:25:49	Bronze	Bangle		HAM76.0455
2694	G.15:3:12	Iron	Buckle		HAM76.0456
2695	G.15:3:12	Bronze	Needle		HAM76.0457
2696	C.9:29:66	Iron	Attachment		HAM76.0458
2697	C.7:77:163	Iron	Bar		HAM76.0459
2698	C.8:34:78	Iron	Nail		HAM76.0460
2699	C.9:30:61	Limestone	Weight		HAM76.0461
2700	C.9:29:66	Limestone	Weight		HAM76.0462
2701	C.1:131:924	Ceramic	Spindle Whorl Fragment		HAM76.0463
2702	C.1:133:939	Ceramic	Spindle Whorl Fragment		HAM76.0464
2703	C.1:133:938	Ceramic	Spindle Whorl Fragment		HAM76.0465
2704	C.5:165:420	Ceramic	Spindle Whorl Fragment		HAM76.0466
2705	C.1:133:938	Ceramic	Spindle Whorl Fragment		HAM76.0467
2706	C.1:133:937	Ceramic	Spindle Whorl Fragment		HAM76.0468
2707	C.1:133:937	Ceramic	Spindle Whorl Fragment		HAM76.0469
2708	C.1:131:925	Ceramic	Spindle Whorl Fragment		HAM76.0470
2709	C.1:133:938	Ceramic	Spindle Whorl		HAM76.0471
2710	C.1:133:937	Ceramic	Spindle Whorl Fragment		HAM76.0472
2711	C.1:135:932	Ceramic	Spindle Whorl Fragment		HAM76.0473
2712	C.10:32:76	Crystal	Ring Stone		DAJ
2713	G.14:10:38	Bronze	Ring		HAM76.0474
2714	C.9:29:69	Bronze	Ring		HAM76.0475
2715	C.5:181:465	Glass	Bead		HAM76.0476
2716a-c	F.31:8:20	Bone?	Spindle & Whorl Fragments		HAM76.0477
2717	F.31:8:22	Bone	Hairpin Fragment		HAM76.0478
2718	G.13:17:16	Iron	Nail		HAM76.0479
2719	G.14:18:35	Iron	Nail		HAM76.0480
2720	C.9:22:71	Iron	Nail		HAM76.0481
2721	G.13:4:10	Ceramic	Spindle Whorl		DAJ
2722	G.11:18:21	Ceramic	Spindle Whorl		DAJ
2723	C.1:131:928	Ceramic	Spindle Whorl		HAM76.0482
2724	C.1:133:944	Ceramic	Spindle Whorl Fragment		HAM76.0483
2725	C.1:136:943	Ceramic	Spindle Whorl Fragment		HAM76.0484
2726	C.1:136:943	Ceramic	Spindle Whorl Fragment?		HAM76.0485
2727	C.1:136:943	Ceramic	Spindle Whorl Fragment		HAM76.0486

2728	C.1:131:928	Ceramic	Spindle Whorl Fragment		HAM76.0487
2729	A.11:12:22	Ceramic	Inscribed Sherd	Islamic	HAM76.0488
2730	C.1:134:929	Ceramic	Spindle Whorl Fragment		HAM76.0489
2731	G.4:22:26	Ceramic	Spindle Whorl		HAM76.0490
2732	F.34:4 B:14	Ceramic	UD		HAM76.0491
2733	G.14:13:24	Ceramic	Jar	Byzantine	HAM76.0492
2734	F.27:8B:40	Ceramic	Plate		HAM76.0493
2735	C.5:174:432	Ceramic	Figurine Head	Roman/Byz.	HAM76.0494
2736	Survey, Site 26	Ceramic	Ostracon		HAM76.0495
2737	Survey, Site 26	Ceramic	Pendant		HAM76.0496
2738	Survey, Site 26	Ceramic	Figurine Fragment	Iron 2?	HAM76.0497
2739	C.7:88:165	Ceramic	Jar		HAM76.0498
2740	F.31:8:25	Bone	Spindle Whorl		HAM76.0321
2741	A.9:19:25	Glass	Bead		HAM76.0499
2742	C.6:77:141	Iron	Hook		HAM76.0500
2743	C.10:32:80	Iron	Nail		HAM76.0501
2744	G.17:4:4	Iron	Nail		HAM76.0502
2745	F.27:8:13	Basalt	Vessel Fragment		HAM76.0503
2746	C.5:181:458	Basalt	Muller		—
2747	G.14:24:46	Bronze	Necklace		DAJ
2748	F.38:3:14	Bone	Hairpin		HAM76.0504
2749	F.38:3:14	Pseudo-Jet	Button		HAM76.0505
2750	F.37:8:9	Glass	Bead		HAM76.0506
2751	F.31:21:55	Bronze	Bangle		HAM76.0507
2752	F.38:3:11	Bone	Hairpin Head		HAM76.0508
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